

**DATA EVALUATION RECORD
CHRONIC TOXICITY TEST WITH THE HONEY BEE
Non-Guideline Chronic Feeding Study**

1. **CHEMICAL:** Acetochlor PC Code No.: 121601

2. **TEST MATERIAL:** Acetochlor Technical Purity: 96.6%

3. **CITATION**

Author: Tomé, H.V.V., Porch, J.R., Scheckenberger, G., and L. Zhang

Title: Acetochlor Technical: A Chronic Dietary Toxicity Test with the Adult Honey Bee (*Apis mellifera*)

Study Completion Date: June 26, 2020

Laboratory: Eurofins EAG Agroscience, LLC

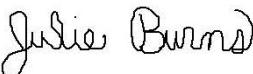
Sponsors: Sharda Cropchem Ltd.

Laboratory Report ID: 662H-102C

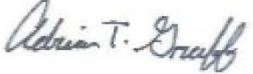
DP Barcode: 459076

MRID No.: 51195301

4. **REVIEWED BY:** Julie Burns, Environmental Scientist, CDM/CSS-Dynamac JV


Signature: Date: 11/4/2020

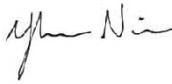
APPROVED BY: Adrian Graff, Environmental Scientist, CDM/CSS-Dynamac JV


Signature: Date: 12/23/2020

5. **APPROVED BY:** Hannah Yingling, Biologist, USEPA


Signature: Date: 2/15/2021

APPROVED BY: Meghann Niesen, Biologist, USEPA


Signature: Digitally signed by MEGHANN
NIESEN
Date: 2021.03.18 14:31:39 -04'00'

6. DISCLAIMER: This Data Evaluation Record may have been altered by the Environmental Fate and Effects Division subsequent to signing by CDM/CSS-Dynamac JV personnel. The CDM/CSS-Dynamac Joint Venture role does not include establishing Agency policies.

7. STUDY PARAMETERS:

Age of Test Organisms at Test Initiation: < 48 hours

Exposure Duration: 10 days

8. CONCLUSIONS: The honey bee, *Apis mellifera* L., was exposed to **Acetochlor Technical** for 10 days in a feeding study at the nominal concentrations and nominal dietary doses shown in the table below. Mean-measured diet concentrations and measured actual intake dietary doses were provided by the study author and are also summarized in the table below.

Nominal Diet Concentration (mg ai/kg diet)	Mean-Measured Diet Concentration (mg ai/kg diet)	Nominal Dietary Dose (μg ai/bee/day)	Measured Actual Intake Dietary Dose (μg ai/bee/day)
46.9	48.5	0.94	1.2
93.8	96.4	1.9	2.5
188	193	3.8	4.4
375	366	7.5	8.5
750	660	15	13

Mortality was the most sensitive endpoint in this study, with a maximum effect of 100% in the highest test level ($p = 0.00007$). The resulting NOAEC and LC₅₀ were 96.4 and 210 mg ai/kg diet, respectively (corresponding to a NOAEL and LD₅₀ of 2.5 and 4.9 μg ai/bee/day, respectively). Food consumption was significantly reduced in the highest test level, with a maximum effect of 37% ($p < 0.05$). Behavioral abnormalities were observed in 1-2 bees in the three highest test levels.

Endpoint	Mortality	Food Consumption
Diet Concentration (mg ai/kg diet)	LC ₅₀ : 210 95% CI: 166 - 266 Slope: N/A NOAEC: 96.4 LOAEC: 193	IC ₅₀ : 1120* 95% CI: 425 - 2954 Slope: N/A NOAEC: 366 LOAEC: 660
Dietary Dose (μg ai/bee/day)	LD ₅₀ : 4.9 95% CI: 4.0 - 6.1 Slope: N/A NOAEL: 2.5 LOAEL: 4.4	ID ₅₀ : 20* 95% CI: 8.5 - 47 Slope: N/A NOAEL: 8.5 LOAEL: 13

* Value extrapolated beyond the highest measured diet concentration/dietary dose. Results should be interpreted

with caution.

9. ADEQUACY OF THE STUDY:

This study is scientifically sound and is classified as acceptable.

10. GUIDELINE DEVIATIONS: This study was conducted following the proposed OECD Guideline for the Testing of Chemicals: Honey bees (*Apis mellifera L.*), chronic oral toxicity test (10 day feeding test in the laboratory). Deviations were noted:

1. It was not reported if bees were kept in conditions conforming to proper cultural differences.
2. Raw environmental condition data (temperature and relative humidity) were not reported.
3. Incomplete physiochemical properties of the test item were reported.

These deviations do not impact the acceptability of this study.

11. SUBMISSION PURPOSE: This study was conducted for the purpose of chemical re-registration.

12. MATERIALS AND METHODS:

A. Test Organisms

Guideline Criteria	Reported Information
Species Honey Bee (<i>Apis mellifera L.</i>)	Honey Bee (<i>Apis mellifera</i>)
Age at beginning of test Worker bees of uniform age.	< 48 hours
Source	Local hives maintained by Eurofins.
Were bees from diseased-free colonies?	Bees originated from a hive that appeared healthy, queen-right, and had not been treated with any insecticides or miticides within four weeks of the definitive test.

Guideline Criteria	Reported Information
Were bees kept in conditions conforming to proper cultural practices?	Not reported.
Acclimation conditions	Bees were acclimated to test conditions 24-hours prior to test start. Bees were provided 50% (w/v) sucrose solution <i>ad libitum</i> . At the end of acclimation, 24 test cages with 10 apparently healthy bees were selected for use in the study.

B. Test System

Guideline Criteria	Reported Information
Test Chambers	Clean, perforated, stainless steel cylinders (9 cm diameter x 9 cm height). Test chambers were covered with Petri dishes. The bottom Petri dish was lined with filter paper. Bees were maintained in an environmental chamber.
Temperature during exposure	33-34°C
Relative humidity during exposure	56-74%
Lighting	Bees were maintained in darkness, except during dosing and observations.
Feeding	Test and control diets were provided <i>ad libitum</i> for the duration of the test.

C. Test Design

Guideline Criteria	Reported Information
<u>Test material</u>	<p>Identity: Acetochlor Technical Synonyms: Not reported Description: Light yellow liquid IUPAC name: Not reported CAS No.: Not reported Batch No.: 20180139 Purity: 96.6% Storage: Not reported</p>
<u>Nominal application rates</u> The test material should be applied at the maximum proposed label rate.	<p><u>Diet Concentrations:</u> 0 (negative and solvent controls), 46.9, 93.8, 188, 375, and 750 mg ai/kg diet</p> <p><u>Dietary Doses:</u> 0 (negative and solvent controls), 0.94, 1.9, 3.8, 7.5, and 15 µg ai/bee/day</p>
<u>Dose Preparation</u>	<p>An 88.5 mg ai/mL primary stock solution was prepared by bringing 0.9161 g of test item (adjusted for purity) to a final volume of 10 mL in acetone. Additional dosing stock solutions were prepared by serial dilution from the primary stock. To prepare the final test diets, a 1.0 mL aliquot of the appropriate stock was taken and brought to a final volume of 100 mL with sucrose solution containing 0.05% xanthan gum. The diets were inverted at least 20 times, sonicated for 10 minutes, and stirred for 30 minutes. The primary and secondary diets appeared cloudy, and the lower levels were clear. Fresh stocks and diets were prepared on days 0, 2, and 6, and were stored refrigerated after each use.</p>
<u>Number of bees exposed</u>	<p>Each treatment (including untreated control, solvent control, and toxic reference item) had 3 replicates, with 10 bees per replicate. 30 total bees per treatment application were exposed.</p>

Guideline Criteria	Reported Information
<u>Application methods</u>	<p>The test sucrose feeding solutions were provided <i>ad libitum</i> with two syringe feeders (2.5 mL) per chamber. Syringe tips were removed. Feeders were replaced every day with treatment solutions.</p> <p>Feeders were weighed before and after feeding. The food consumed was determined by comparing the initial and remaining weights.</p>
<u>Other experimental design information</u>	<p>Individual daily consumption was corrected for daily mortality and for estimated evaporation. Three replicate cages with 50% sucrose solution and containing no bees were included to determine evaporative loss during each feeding period.</p>
<u>Were bees randomly or impartially assigned to test groups?</u>	<p>Yes, bees were impartially assigned to test chambers prior to acclimation, and test cages were impartially allocated to treatment groups.</p>
<u>Control(s)</u>	<p>Negative control: 50% (w/v) sucrose solution Solvent control: 50% (w/v) sucrose solution containing acetone and 0.05% xanthan gum.</p>
<u>Exposure period</u>	<p>10 days.</p>
<u>Positive Control, (if any)</u>	<p>Dimethoate, tested at a measured concentration of 0.65 mg ai/kg.</p>

13. REPORTED RESULTS:

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	<p>Yes, signed and dated statements of No Data Confidentiality Claims, Good Laboratory Practice Compliance, and Quality Assurance. This study was conducted in compliance with GLP standards published by the U.S. EPA (40 CFR Part 160, 1989), which are compatible with the OECD principles of GLP (ENV/MC/CHEM(98)17), with the following exceptions:</p> <ul style="list-style-type: none"> 1) Periodic analyses of water and sugar for potential contaminants 2) Characterization and stability of the test and positive control substance (dimethoate) in dose solutions and under storage conditions at the site 3) The stability, homogeneity, and verification of dimethoate in the dose solutions.
<u>Control mortality</u>	<p>Negative control: 3% Solvent control: 0%</p>
Were raw data included?	<p>Yes, except for environmental conditions (temperature and relative humidity).</p>
Were signs of toxicity (if any) described?	<p>All bees were observed for mortality, behavioral, and toxicological responses once within the first four hours of dosing, and at approximately 24-hour intervals thereafter. Abnormal behavior was determined by comparing honey bees in the treatment groups with those in the negative control.</p>

Mortality and Observations:

Mean-Measured Concentrations, mg ai/kg diet (Measured Actual Intake Dietary Doses, µg ai/bee/day)	Number Exposed	Mortality at 10 days (%)^a	Behavioral Abnormalities^b
10-day Chronic Feeding Toxicity Test			
Negative control	30	3	None.
Solvent control	30	0	None.
Acetochlor Technical	48.5 (1.2)	30	37
	96.4 (2.5)	30	10
	193 (4.4)	30	43
	366 (8.5)	30	80
	660 (13)	30	100

^a Data obtained from Table 3, p. 20 of the MRID.

^b Data obtained from Appendix 6, pp. 47-50 of the MRID.

After 10 days, mortality averaged 3% and 0% in the negative and solvent controls, respectively, compared to mortality ranging from 10 to 100% in the test item groups. Mortality appeared to be dose responsive in the four highest test levels.

Daily food consumption averaged 27.6 and 22.7 mg/bee/day in the negative and solvent controls, respectively, and averaged 24.9, 26.2, 23.6, 22.8, and 17.3 mg/bee/day in the measured 48.5, 96.4, 193, 366, and 660 mg ai/kg diet treatment levels, respectively. Effects on food consumption appeared to be dose responsive.

Behavioral abnormalities were recorded daily. One or two affected bees were only observed in the three highest test levels throughout the test duration.

Study Author's Statistical Analysis

Mortality data were tested for equal variance and normal distributions using a Modified Levene and Shapiro-Wilk test, respectively. The treatment group means were subsequently compared to the negative control mean using Williams' Multiple Comparison test. LC₅₀ and LD₅₀ values were determined by Trimmed Spearman-Kärber analysis. All statistical analyses were performed using CETIS v.1.9.1. The study author reported the following based on nominal concentrations and measured actual intake dietary doses:

10-day LC₅₀: 208 mg ai/kg diet 95% C.I.: 163 - 266 mg ai/kg diet
NOAEC: 188 mg ai/kg diet

10-day LD₅₀: 4.93 µg ai/bee/day 95% C.I.: 3.97 - 6.12 µg ai/bee/day
NOAEL: 4.4 µg ai/bee/day

Reviewer's Statistical Verification:

The reviewer analyzed mortality and food consumption data using CETIS statistical software version 1.9.6.12 with database backend settings implemented by EFED on 7/25/17. The test codes were designated the MRID number, followed by the acronyms "dc" for dietary concentration and "dd" for dietary dose. Measured actual intake dietary doses and measured diet concentrations, calculated by the study author, were used for the analyses. All analyses were conducted at $\alpha = 0.05$, unless specified otherwise.

Negative and solvent control mortality and food consumption data were compared using an Equal Variance t Two-Sample Test, with no significant differences noted. All further hypothesis testing was conducted comparing treatment data to negative control data only.

Treatment data were tested for normality using Shapiro-Wilk's test ($\alpha = 0.01$) and for homogeneity of variance using Bartlett's test ($\alpha = 0.01$). Mortality data fit the normal distribution, but the variance was indeterminate. The mortality data were monotonically increasing, and subsequent analysis was performed using a Jonckheere-Terpstra Step-Down test. Food consumption data had a normal distribution, were homoscedastic, and determined to be monotonically decreasing. Subsequent analysis was performed using a Williams Multiple Comparison Test.

Treatment group mortalities were corrected for negative control mortality using Abbott's Correction. The reviewer attempted to use linear regression to determine the 10-day mortality LC/LD₅₀ values, however, 95% confidence intervals could not be determined. Therefore, these LC/LD₅₀ values were estimated using the Trimmed Spearman-Kärber method. Food consumption results were extrapolated using nonlinear regression and these values should be interpreted with caution.

Endpoint	Mortality	Food Consumption
Diet Concentration (mg ai/kg diet)	LC ₅₀ : 210 95% CI: 166 - 266 Slope: N/A NOAEC: 96.4 LOAEC: 193	IC ₅₀ : 1120* 95% CI: 425 - 2954 Slope: N/A NOAEC: 366 LOAEC: 660
Dietary Dose ($\mu\text{g ai/bee/day}$)	LD ₅₀ : 4.9 95% CI: 4.0 - 6.1 Slope: N/A NOAEL: 2.5 LOAEL: 4.4	ID ₅₀ : 20* 95% CI: 8.5 - 47 Slope: N/A NOAEL: 8.5 LOAEL: 13

*Value extrapolated beyond the highest measured diet concentration/dietary dose. Results should be interpreted with caution.

14. REVIEWER'S COMMENTS:

The reviewer determined a more toxicologically conservative 10-day mortality NOAEC/NOAEL level compared to the study author. Differences are likely attributed to the study author using the parametric Williams Multiple Comparison for statistical analysis, whereas the reviewer used a nonparametric Jonckheere-Terpstra Step-Down test. The reviewer's and the study author's LC₅₀ and LD₅₀ values were similar despite the reviewer's use of mean-measured concentrations and the study author's use of nominal concentrations (both used the same dietary doses). The study author did not analyze food consumption, which was a significantly affected endpoint in this study. The reviewer's results are reported in the Conclusions section of this DER.

According to OECD Draft Guidance, the test was considered to be valid if:

1. The average control mortality was $\leq 15\%$ by test termination (in this study, mortality was 3% and 0% in the negative and solvent controls, respectively).
2. The average reference item mortality was $\geq 50\%$ by test termination (in this study, mortality reached 100% at test termination).

Both validity criteria were met.

The in-life phase of this study was conducted from April 22 to May 2, 2020.

15. REFERENCES:

European Food Safety Authority. 2013. EFSA Guidance Document on the risk assessment of plant protection products on bees (*Apis mellifera*, *Bombus* spp. And Solitary Bees). EFSA Journal 2013: 11(7)3295, 266pp.

DP Barcode: 459076

MRID No.: 51195301

Michener, Charles. 2007. Bees of the World. Johns Hopkins University Press; 2nd ed. Baltimore, MD.

Tidepool Scientific Software. 2011. *Users Guide, Comprehensive Environmental Toxicity Information System (CETIS)*. Tidepool Scientific Software, McKinleyville, CA.

CETIS Analytical Report

Report Date: 03 Nov-20 19:59 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC		
Analysis ID:	19-7252-4680	Endpoint:	10-Day Mortality Rate		CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:43	Analysis:	Linear Regression (GLM)		Status Level:	1
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral		Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day		Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera		Brine:	
Test Length:	10d 0h	Taxon:			Source:	Eurofins EAG Agroscience, Age: <48

Linear Regression Options

Model Name	Link Function	Threshold Option	Thresh	Optimize	Pooled	Het Corr	Weighted
Log-Normal (Probit)	$\eta = \text{inv } \Phi[\pi]$	Contrd Threshold	0.169503	Yes	No	Yes	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	PM SD	F Stat	P-Value	Decision($\alpha:5\%$)
15	-44.5	96.72	97.67	2.403483	0.1852031	0.5933	24.30%	0.9119	0.4642	Non-Sig Lack of Fit

Point Estimates

Level	mg ai/kg	95% LCL	95% UCL
EC5	125.6	n/a	n/a
EC10	146.6	n/a	n/a
EC25	189.9	n/a	n/a
EC50	253.2	n/a	n/a

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	Test Stat	P-Value	Decision($\alpha:5\%$)
Threshold	0.1695	0.09468	-0.03231	0.3713	1.79	0.0936	Non-Significant Parameter
Intercept	-12.98	7.024	-27.95	1.993	-1.848	0.0845	Non-Significant Parameter
Slope	5.399	2.834	-0.6416	11.44	1.905	0.0761	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	138.9	69.43	2	13.4	4.6E-04	Significant Effect
Lack of Fit	14.43	4.81	3	0.9119	0.4642	Non-Significant Effect
Pure Error	63.3	5.275	12			
Residual	77.73	5.182	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Model Fit	Likelihood Ratio GOF Test	68.58	25	<1.0E-37	Sig Heterogeneity
	Pearson Chi-Sq GOF Test	77.73	25	<1.0E-37	Sig Heterogeneity
Variance	Mod Levene Equality of Variance Test	0.9414	4.387	0.5163	Equal Variances
	Anderson-Darling A2 Normality Test	1.495	2.492	1.9E-04	Non-Normal Distribution
Distribution	Shapiro-Wilk W Normality Test	0.7937	0.8965	0.0012	Non-Normal Distribution
	Tarone C(α) Binomial Overdispersion	9.951	1.645	<1.0E-37	Sig Overdispersion

10-Day Mortality Rate Summary**Calculated Variate(A/B)**

Conc-mg ai/kg	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	N	3	0.0333	0.0000	0.1000	0.0333	0.0577	173.20%	0.0%	1	30
48.5		3	0.3667	0.0000	1.0000	0.3180	0.5508	150.20%	34.48%	11	30
96.4		3	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	6.9%	3	30
193		3	0.4333	0.3000	0.6000	0.0882	0.1528	35.25%	41.38%	13	30
366		3	0.8000	0.4000	1.0000	0.2000	0.3464	43.30%	79.31%	24	30
660		3	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.0%	30	30

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

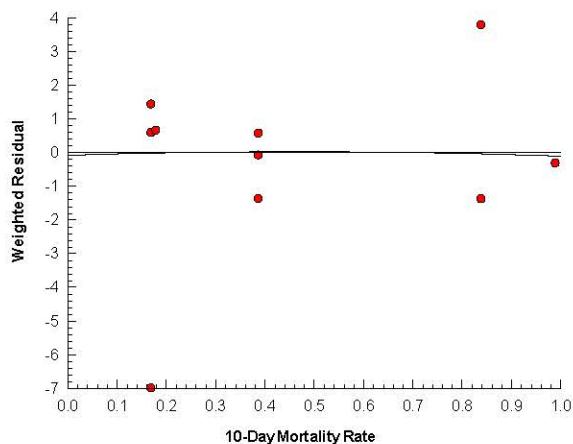
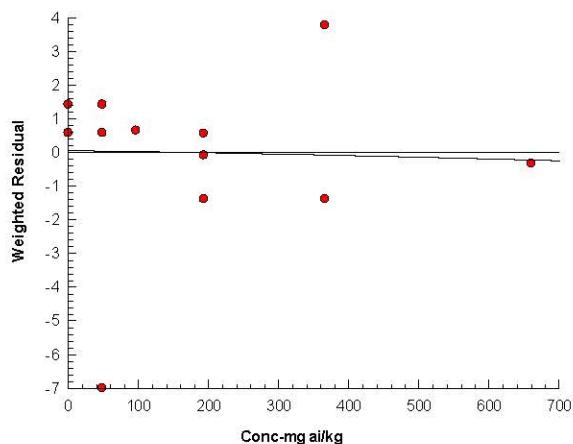
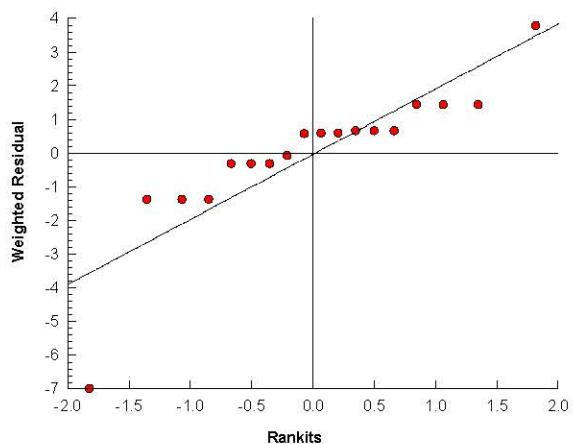
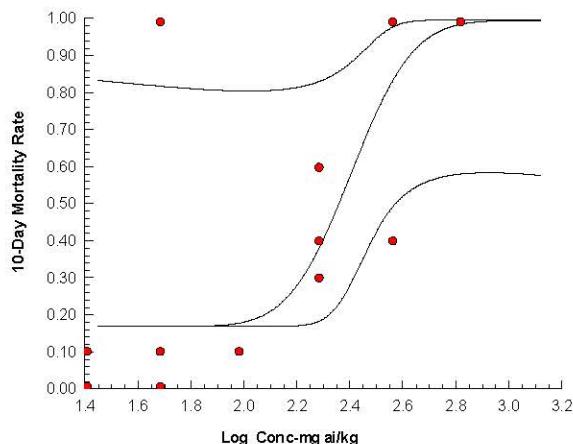
Eurofins EAG Agroscience, LLC

Analysis ID: 19-7252-4680
 Analyzed: 03 Nov-20 19:43

Endpoint: 10-Day Mortality Rate
 Analysis: Linear Regression (GLM)

CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Log-Normal: $\text{inv } \Phi[\pi] = \alpha + \beta \cdot \log[x]$ 

CETIS Analytical Report

Report Date: 03 Nov-20 19:59 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	05-9706-9298	Endpoint:	Food Consumption		CETIS Version: CETISv1.9.6
Analyzed:	03 Nov-20 19:44	Analysis:	Nonlinear Regression (NLR)		Status Level: 1
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral		Analyst:
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day		Diluent:
Ending Date:	02 May-20	Species:	Apis mellifera		Brine:
Test Length:	10d 0h	Taxon:			Source: Eurofins EAG Agroscience, Age: <48

Non-Linear Regression Options

Model Name and Function			Weighting Function		PTBS Function		X Trans	Y Trans
3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi[\log[x/\delta]/\gamma]]$			Normal [$\omega=1$]		Off [$\mu^*=\mu$]		None	None

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	PM SD	Thresh	Optimize	F Stat	P-Value	Decision($\alpha:5\%$)
18	-19.3	46.32	47.27	0.4931	10.36%	26.38	Yes	0.5122	0.6814	Non-Sig Lack of Fit

Point Estimates

Level	mg ai/kg	95% LCL	95% UCL
EC5	155	n/a	305.8
EC10	239.9	n/a	419.2
EC25	497.7	322.6	703.8
EC50	1120	424.5	2954

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision($\alpha:5\%$)
α	26.38	1.283	23.64	29.11	20.57	<1.0E-37	Significant Parameter
γ	1.202	0.605	-0.08732	2.492	1.987	0.0655	Non-Significant Parameter
δ	1120	435.4	191.7	2048	2.572	0.0213	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	10310	3437	3	355.1	<1.0E-37	Significant Effect
Lack of Fit	16.48	5.492	3	0.5122	0.6814	Non-Significant Effect
Pure Error	128.7	10.72	12			
Residual	145.1	9.676	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Variance	Bartlett Equality of Variance Test	7.349	11.07	0.1959	Equal Variances
	Mod Levene Equality of Variance Test	0.9168	4.387	0.5280	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.5365	2.492	0.1731	Normal Distribution
	Shapiro-Wilk W Normality Test	0.923	0.8965	0.1458	Normal Distribution

Food Consumption Summary

Conc-mg ai/kg	Code	Count	Calculated Variate						
			Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	3	27.6	22.78	30.06	2.412	4.177	15.13%	0.0%
48.5		3	24.89	24.32	26.04	0.5727	0.9919	3.98%	9.81%
96.4		3	26.2	23.53	28.77	1.514	2.623	10.01%	5.07%
193		3	23.61	21.72	26.08	1.291	2.236	9.47%	14.45%
366		3	22.76	18.04	29.17	3.319	5.75	25.26%	17.53%
660		3	17.26	16.56	18.38	0.5676	0.9831	5.70%	37.47%

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

Eurofins EAG Agroscience, LLC

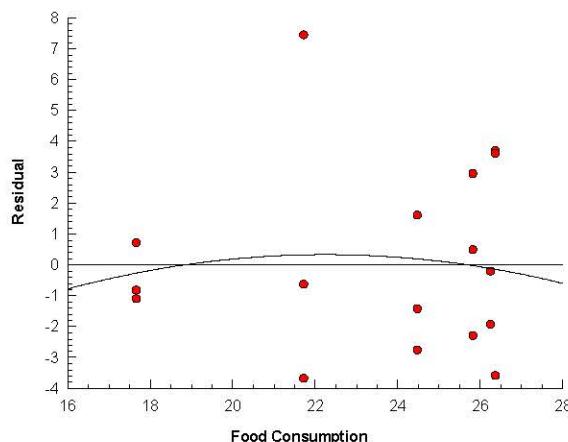
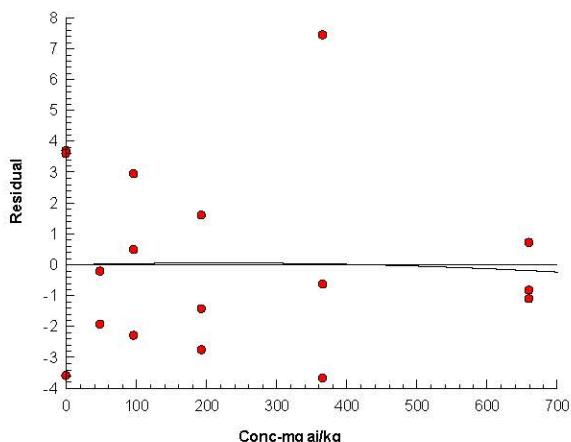
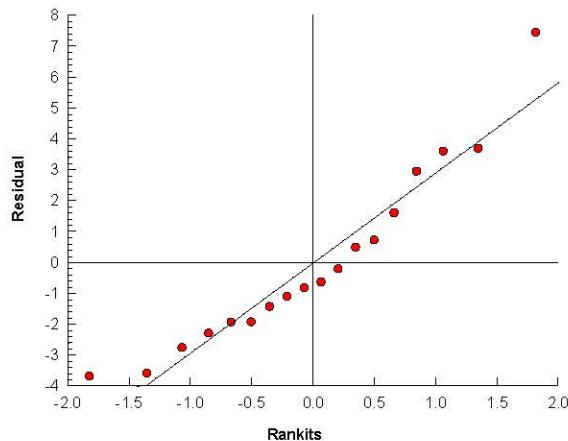
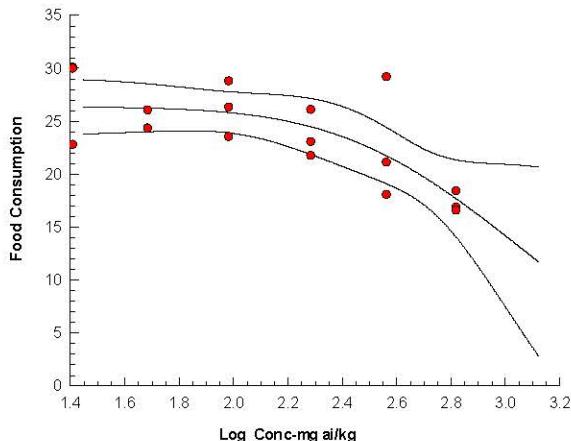
Analysis ID: 05-9706-9298
 Analyzed: 03 Nov-20 19:44

Endpoint: Food Consumption
 Analysis: Nonlinear Regression (NLR)

CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Model: 3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi[\log[x/\delta]/\gamma]]$ Distribution: Normal [$\omega=1$]



CETIS Summary Report

 Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:
Test Length:	10d 0h	Taxon:		Source: Eurofins EAG Agroscience, Age: <48
Sample ID:	12-5085-6504	Code:	51195301 dc	Project: Herbicide
Sample Date:	22 Apr-20	Material:	Acetochlor	Source: Sharda Cropchem Limited
Receipt Date:		CAS (PC):		Station:
Sample Age:	n/a	Client:	CDM Smith	

121601 51195301 mean-measured diet concentrations, record created by: J. Burns. CETIS Comments: '10-Day Mortality Rate' endpoint...

Error with Log-Normal (Probit) Model:

The slope is not significantly different from zero, therefore confidence limits are unavailable.

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
18-0339-4887	10-Day Mortality Rate	Equal Variance t Two-Sample Test	0.3739	Solvent Blank passed 10-day mortality rate	1
20-1021-1788	Food Consumption	Equal Variance t Two-Sample Test	0.1321	Solvent Blank passed food consumption	1

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	TU	PM SD	S
20-3573-8147	10-Day Mortality Rate	Jonckheere-Terpstra Step-Down Test	96.4	193	136.4		n/a	1
20-1079-6322	10-Day Mortality Rate	Mann-Whitney U Two-Sample Test	96.4	193	136.4		49.3%	1
15-1707-6337	Food Consumption	Dunnett Multiple Comparison Test	366	660	491.5		24.2%	1
16-1878-0192	Food Consumption	Williams Multiple Comparison Test	366	660	491.5		18.7%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	mg ai/kg	95% LCL	95% UCL	TU	S
19-7252-4680	10-Day Mortality Rate	GLM: Log-Normal (Probit)	EC5	125.6	n/a	n/a		1
			EC10	146.6	n/a	n/a		
			EC25	189.9	n/a	n/a		
			EC50	253.2	n/a	n/a		
11-4422-8897	10-Day Mortality Rate	Trimmed Spearman-Kärber	EC50	210	165.7	266.1		1
05-9706-9298	Food Consumption	NLR: 3P Cum Log-Normal (Probit)	EC5	155	n/a	305.8		1
			EC10	239.9	n/a	419.2		
			EC25	497.7	322.6	703.8		
			EC50	1120	424.5	2954		

10-Day Mortality Rate Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.1000	0.0333	0.0577	173.21%	3.33%
48.5		3	0.3667	0.0000	1.0000	0.0000	1.0000	0.3180	0.5508	150.21%	36.67%
96.4		3	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	10.00%
193		3	0.4333	0.0539	0.8128	0.3000	0.6000	0.0882	0.1528	35.25%	43.33%
366		3	0.8000	0.0000	1.0000	0.4000	1.0000	0.2000	0.3464	43.30%	80.00%
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.00%

Food Consumption Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	22.71	18.61	26.81	20.83	23.92	0.9524	1.65	7.26%	0.00%
0	N	3	27.6	17.23	37.98	22.78	30.06	2.412	4.177	15.13%	-21.55%
48.5		3	24.89	22.43	27.36	24.32	26.04	0.5727	0.9919	3.98%	-9.63%
96.4		3	26.2	19.69	32.72	23.53	28.77	1.514	2.623	10.01%	-15.39%
193		3	23.61	18.06	29.17	21.72	26.08	1.291	2.236	9.47%	-3.99%
366		3	22.76	8.482	37.05	18.04	29.17	3.319	5.75	25.26%	-0.25%
660		3	17.26	14.82	19.7	16.56	18.38	0.5676	0.9831	5.70%	24.00%

CETIS Summary ReportReport Date: 03 Nov-20 20:00 (p 2 of 2)
Test Code/ID: 51195301 dc / 07-0057-7497**Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study****Eurofins EAG Agroscience, LLC****10-Day Mortality Rate Detail**

Conc-mg ai/kg	Code	Rep 1	Rep 2	Rep 3
0	S	0.0000	0.0000	0.0000
0	N	0.0000	0.0000	0.1000
48.5		1.0000	0.1000	0.0000
96.4		0.1000	0.1000	0.1000
193		0.6000	0.3000	0.4000
366		1.0000	0.4000	1.0000
660		1.0000	1.0000	1.0000

Food Consumption Detail

Conc-mg ai/kg	Code	Rep 1	Rep 2	Rep 3
0	S	23.92	23.38	20.83
0	N	30.06	22.78	29.97
48.5		24.32	26.04	24.32
96.4		28.77	23.53	26.31
193		21.72	23.05	26.08
366		29.17	18.04	21.09
660		16.84	18.38	16.56

CETIS Analytical Report

Report Date: 03 Nov-20 19:59 (p 1 of 1)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

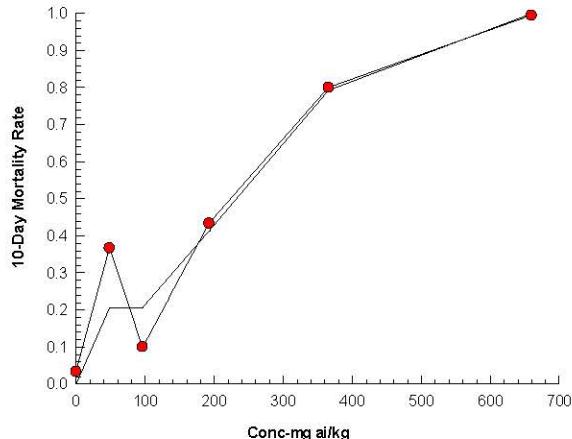
Eurofins EAG Agroscience, LLC

Analysis ID:	11-4422-8897	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:44	Analysis:	Trimmed Spearman-Kärber	Status Level:	1
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Trimmed Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.03333	20.69%	2.322271	0.0514179	210	165.7	266.1

10-Day Mortality Rate Summary			Calculated Variate(A/B)						Isotonic Variate		
Conc-mg ai/kg	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	N	3	0.0333	0.0000	0.1000	0.0577	173.20%	0.0%	1/30	0.03333	0.0%
48.5		3	0.3667	0.0000	1.0000	0.5508	150.20%	34.48%	11/30	0.2333	20.69%
96.4		3	0.1000	0.1000	0.1000	0.0000	0.00%	6.9%	3/30	0.2333	20.69%
193		3	0.4333	0.3000	0.6000	0.1528	35.25%	41.38%	13/30	0.4333	41.38%
366		3	0.8000	0.4000	1.0000	0.3464	43.30%	79.31%	24/30	0.8	79.31%
660		3	1.0000	1.0000	1.0000	0.0000	0.00%	100.0%	30/30	1	100.0%

Graphics

CETIS Analytical Report

Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	09-8930-2219	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:51	Analysis:	Linear Regression (GLM)	Status Level:	1
Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Linear Regression Options

Model Name	Link Function	Threshold Option	Thresh	Optimize	Pooled	Het Corr	Weighted
Log-Normal (Probit)	$\eta = \text{inv } \Phi[\pi]$	Contrd Threshold	0.170843	Yes	No	Yes	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	PM SD	F Stat	P-Value	Decision($\alpha:5\%$)
15	-45.15	98.01	98.96	0.7657437	0.1752173	0.5766	25.34%	0.9521	0.4465	Non-Sig Lack of Fit

Point Estimates

Level	ug/bee/da	95% LCL	95% UCL
EC5	3.003	n/a	n/a
EC10	3.477	n/a	n/a
EC25	4.442	n/a	n/a
EC50	5.831	n/a	n/a

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	Test Stat	P-Value	Decision($\alpha:5\%$)
Intercept	-4.37	2.484	-9.664	0.9234	-1.76	0.0988	Non-Significant Parameter
Slope	5.707	2.881	-0.433	11.85	1.981	0.0662	Non-Significant Parameter
Threshold	0.1708	0.09857	-0.03926	0.3809	1.733	0.1036	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	134.1	67.07	2	12.58	6.2E-04	Significant Effect
Lack of Fit	15.38	5.127	3	0.9521	0.4465	Non-Significant Effect
Pure Error	64.62	5.385	12			
Residual	80.01	5.334	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Model Fit	Likelihood Ratio GOF Test	69.87	25	<1.0E-37	Sig Heterogeneity
	Pearson Chi-Sq GOF Test	80.01	25	<1.0E-37	Sig Heterogeneity
Variance Distribution	Mod Levene Equality of Variance Test	0.9285	4.387	0.5224	Equal Variances
	Anderson-Darling A2 Normality Test	1.375	2.492	9.0E-04	Non-Normal Distribution
Overdispersion	Shapiro-Wilk W Normality Test	0.8116	0.8965	0.0022	Non-Normal Distribution
	Tarone C(α) Binomial Overdispersion	9.951	1.645	<1.0E-37	Sig Overdispersion

10-Day Mortality Rate Summary**Calculated Variate(A/B)**

Conc-ug/bee/day	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	N	3	0.0333	0.0000	0.1000	0.0333	0.0577	173.20%	0.0%	1	30
1.2		3	0.3667	0.0000	1.0000	0.3180	0.5508	150.20%	34.48%	11	30
2.5		3	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	6.9%	3	30
4.4		3	0.4333	0.3000	0.6000	0.0882	0.1528	35.25%	41.38%	13	30
8.5		3	0.8000	0.4000	1.0000	0.2000	0.3464	43.30%	79.31%	24	30
13		3	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.0%	30	30

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

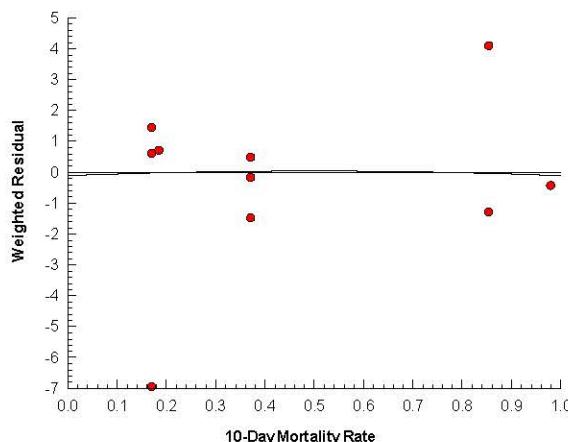
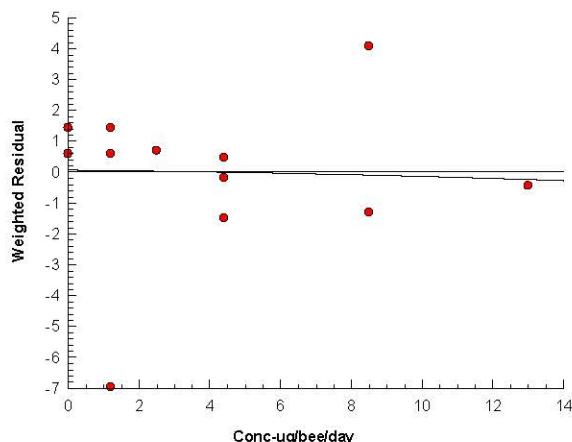
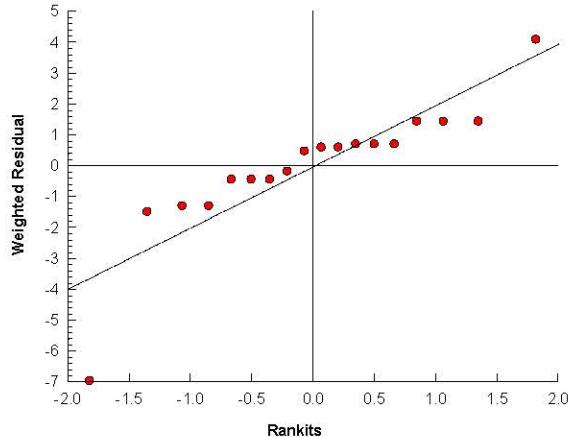
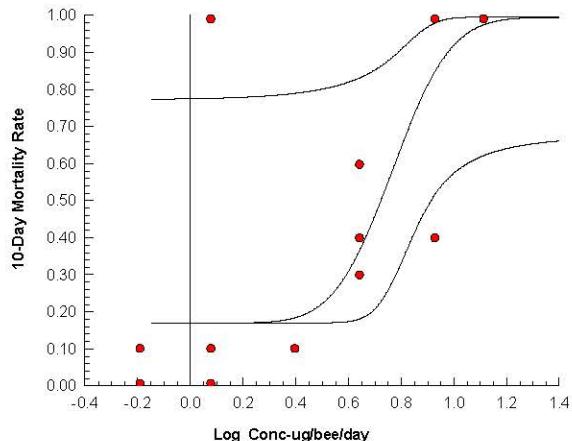
Eurofins EAG Agroscience, LLC

Analysis ID: 09-8930-2219
 Analyzed: 03 Nov-20 19:51

Endpoint: 10-Day Mortality Rate
 Analysis: Linear Regression (GLM)

CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Log-Normal: $\text{inv } \Phi[\pi] = \alpha + \beta \cdot \log[x]$ 

CETIS Analytical Report

Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	11-5307-2149	Endpoint:	Food Consumption	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:52	Analysis:	Nonlinear Regression (NLR)	Status Level:	1
Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Non-Linear Regression Options

Model Name and Function			Weighting Function		PTBS Function		X Trans	Y Trans
3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi(\log[x/\delta]/\gamma)]$			Normal [$\omega=1$]		Off [$\mu^*=\mu$]		None	None

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	PM SD	Thresh	Optimize	F Stat	P-Value	Decision($\alpha:5\%$)
23	-19.58	46.88	47.84	0.4770	9.68%	26.15	Yes	0.6557	0.5947	Non-Sig Lack of Fit

Point Estimates

Level	ug/bee/da	95% LCL	95% UCL
EC5	4.443	n/a	7.872
EC10	6.188	n/a	9.929
EC25	10.76	7.587	14.19
EC50	19.91	8.513	46.58

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision($\alpha:5\%$)
α	26.15	1.187	23.62	28.68	22.03	<1.0E-37	Significant Parameter
γ	0.9119	0.5093	-0.1737	1.998	1.79	0.0936	Non-Significant Parameter
δ	19.91	6.627	5.788	34.04	3.005	0.0089	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	10310	3435	3	344	<1.0E-37	Significant Effect
Lack of Fit	21.09	7.031	3	0.6557	0.5947	Non-Significant Effect
Pure Error	128.7	10.72	12			
Residual	149.8	9.984	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Variance	Bartlett Equality of Variance Test	7.349	11.07	0.1959	Equal Variances
	Mod Levene Equality of Variance Test	0.9168	4.387	0.5280	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.6307	2.492	0.1009	Normal Distribution
	Shapiro-Wilk W Normality Test	0.909	0.8965	0.0827	Normal Distribution

Food Consumption Summary

Conc-ug/bee/day	Code	Count	Calculated Variate						
			Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	3	27.6	22.78	30.06	2.412	4.177	15.13%	0.0%
1.2		3	24.89	24.32	26.04	0.5727	0.9919	3.98%	9.81%
2.5		3	26.2	23.53	28.77	1.514	2.623	10.01%	5.07%
4.4		3	23.61	21.72	26.08	1.291	2.236	9.47%	14.45%
8.5		3	22.76	18.04	29.17	3.319	5.75	25.26%	17.53%
13		3	17.26	16.56	18.38	0.5676	0.9831	5.70%	37.47%

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

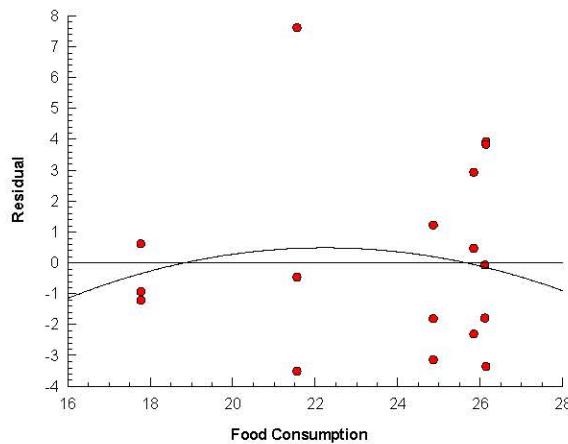
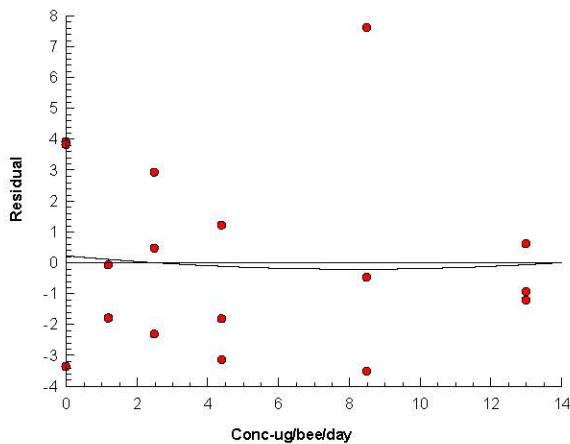
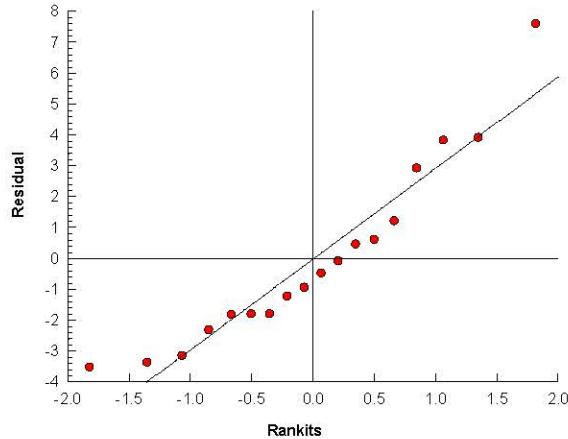
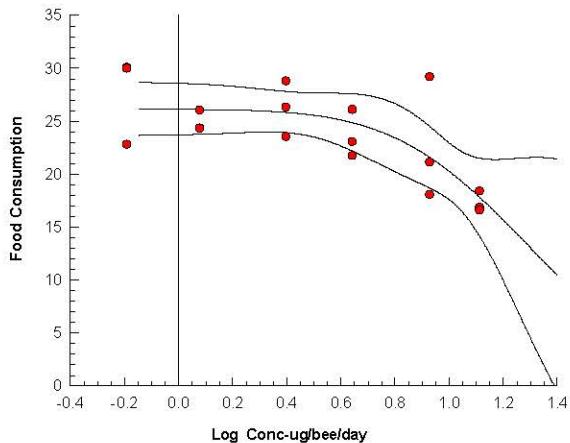
Eurofins EAG Agroscience, LLC

 Analysis ID: 11-5307-2149
 Analyzed: 03 Nov-20 19:52

 Endpoint: Food Consumption
 Analysis: Nonlinear Regression (NLR)

 CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Model: 3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi[\log[x/\delta]/\gamma]]$ Distribution: Normal [$\omega = 1$]

CETIS Summary Report

Report Date: 03 Nov-20 20:01 (p 1 of 2)
Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study**Eurofins EAG Agroscience, LLC**

Batch ID: 21-2120-3292	Test Type: 2014 Honeybee Adult Chron Oral	Analyst:
Start Date: 22 Apr-20	Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:
Ending Date: 02 May-20	Species: Apis mellifera	Brine:
Test Length: 10d 0h	Taxon:	Source: Eurofins EAG Agroscience, Age: <48
Sample ID: 11-9359-8736	Code: 51195301 dd	Project: Herbicide
Sample Date: 22 Apr-20	Material: Acetochlor	Source: Sharda Cropchem Limited
Receipt Date: 03 Nov-20 19:46	CAS (PC):	Station:
Sample Age: n/a	Client: CDM Smith	

121601 51195301 measured actual intake dietary doses, record created by: J. Burns. CETIS Comments: '10-Day Mortality Rate' endpoint...

Error with Log-Normal (Probit) Model:

The slope is not significantly different from zero, therefore confidence limits are unavailable.

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	ug/bee/da	95% LCL	95% UCL	TU	S
09-8930-2219	10-Day Mortality Rate	GLM: Log-Normal (Probit)	EC5	3.003	n/a	n/a		1
			EC10	3.477	n/a	n/a		
			EC25	4.442	n/a	n/a		
			EC50	5.831	n/a	n/a		
11-5823-4748	10-Day Mortality Rate	Trimmed Spearman-Kärber	EC50	4.928	3.965	6.124		1
11-5307-2149	Food Consumption	NLR: 3P Cum Log-Normal (Probit)	EC5	4.443	n/a	7.872		1
			EC10	6.188	n/a	9.929		
			EC25	10.76	7.587	14.19		
			EC50	19.91	8.513	46.58		

10-Day Mortality Rate Summary

Conc-ug/bee/day	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.1000	0.0333	0.0577	173.21%	3.33%
1.2		3	0.3667	0.0000	1.0000	0.0000	1.0000	0.3180	0.5508	150.21%	36.67%
2.5		3	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	10.00%
4.4		3	0.4333	0.0539	0.8128	0.3000	0.6000	0.0882	0.1528	35.25%	43.33%
8.5		3	0.8000	0.0000	1.0000	0.4000	1.0000	0.2000	0.3464	43.30%	80.00%
13		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.00%

Food Consumption Summary

Conc-ug/bee/day	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	22.71	18.61	26.81	20.83	23.92	0.9524	1.65	7.26%	0.00%
0	N	3	27.6	17.23	37.98	22.78	30.06	2.412	4.177	15.13%	-21.55%
1.2		3	24.89	22.43	27.36	24.32	26.04	0.5727	0.9919	3.98%	-9.63%
2.5		3	26.2	19.69	32.72	23.53	28.77	1.514	2.623	10.01%	-15.39%
4.4		3	23.61	18.06	29.17	21.72	26.08	1.291	2.236	9.47%	-3.99%
8.5		3	22.76	8.482	37.05	18.04	29.17	3.319	5.75	25.26%	-0.25%
13		3	17.26	14.82	19.7	16.56	18.38	0.5676	0.9831	5.70%	24.00%

CETIS Summary ReportReport Date: 03 Nov-20 20:01 (p 2 of 2)
Test Code/ID: 51195301 dd / 09-9266-1609**Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study****Eurofins EAG Agroscience, LLC****10-Day Mortality Rate Detail**

Conc-ug/bee/day	Code	Rep 1	Rep 2	Rep 3
0	S	0.0000	0.0000	0.0000
0	N	0.0000	0.0000	0.1000
1.2		1.0000	0.1000	0.0000
2.5		0.1000	0.1000	0.1000
4.4		0.6000	0.3000	0.4000
8.5		1.0000	0.4000	1.0000
13		1.0000	1.0000	1.0000

Food Consumption Detail

Conc-ug/bee/day	Code	Rep 1	Rep 2	Rep 3
0	S	23.92	23.38	20.83
0	N	30.06	22.78	29.97
1.2		24.32	26.04	24.32
2.5		28.77	23.53	26.31
4.4		21.72	23.05	26.08
8.5		29.17	18.04	21.09
13		16.84	18.38	16.56

CETIS Analytical Report

Report Date: 03 Nov-20 20:01 (p 1 of 1)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

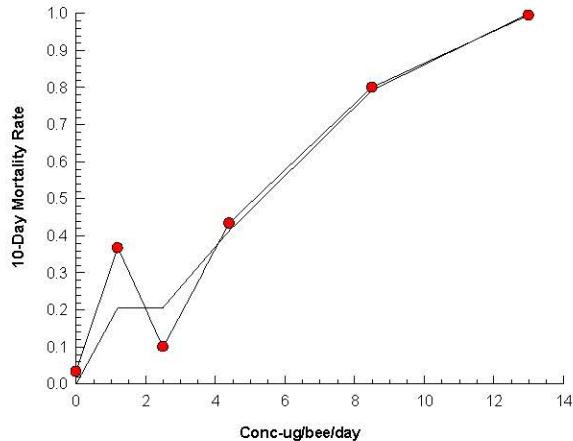
Eurofins EAG Agroscience, LLC

Analysis ID:	11-5823-4748	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:52	Analysis:	Trimmed Spearman-Kärber	Status Level:	1
Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Trimmed Spearman-Kärber Estimates

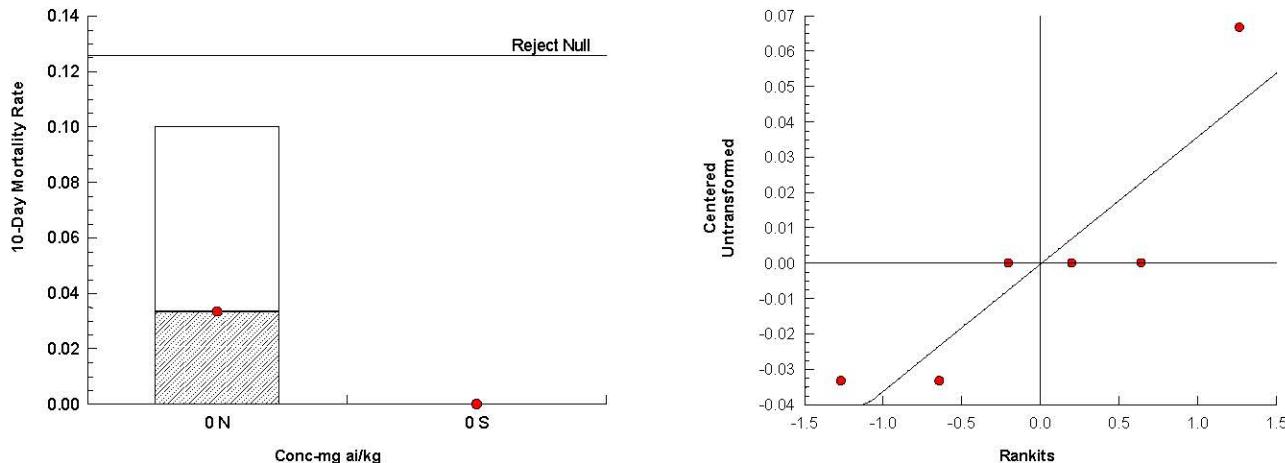
Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.03333	20.69%	0.6926454	0.0471895	4.928	3.965	6.124

10-Day Mortality Rate Summary			Calculated Variate(A/B)						Isotonic Variate		
Conc-ug/bee/day	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	N	3	0.0333	0.0000	0.1000	0.0577	173.20%	0.0%	1/30	0.03333	0.0%
1.2		3	0.3667	0.0000	1.0000	0.5508	150.20%	34.48%	11/30	0.2333	20.69%
2.5		3	0.1000	0.1000	0.1000	0.0000	0.00%	6.9%	3/30	0.2333	20.69%
4.4		3	0.4333	0.3000	0.6000	0.1528	35.25%	41.38%	13/30	0.4333	41.38%
8.5		3	0.8000	0.4000	1.0000	0.3464	43.30%	79.31%	24/30	0.8	79.31%
13		3	1.0000	1.0000	1.0000	0.0000	0.00%	100.0%	30/30	1	100.0%

Graphics

CETIS Analytical ReportReport Date: 03 Nov-20 19:58 (p 1 of 6)
Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study					Eurofins EAG Agroscience, LLC						
Analysis ID:	18-0339-4887	Endpoint:	10-Day Mortality Rate		CETIS Version:	CETISv1.9.6					
Analyzed:	03 Nov-20 19:42	Analysis:	Parametric-Two Sample			Status Level:	1				
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral		Analyst:						
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day		Diluent:						
Ending Date:	02 May-20	Species:	Apis mellifera		Brine:						
Test Length:	10d 0h	Taxon:				Source:	Eurofins EAG Agroscience, Age: <48				
Data Transform	Alt Hyp	Comparison Result					PM SD				
Untransformed	C <> T	Solvent Blank passed 10-day mortality rate					9.57%				
Equal Variance t Two-Sample Test											
Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α :5%)		
Negative Control		Solvent Blank	1	2.776	0.093	4	CDF	0.3739	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α :5%)					
Between	0.0016667	0.0016667	1	1	0.3739	Non-Significant Effect					
Error	0.0066667	0.0016667	4								
Total	0.0083333		5								
ANOVA Assumptions Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision(α :1%)				
Variance	Variance Ratio F Test						Indeterminate				
Distribution	Shapiro-Wilk W Normality Test			0.8137	0.43	0.0778	Normal Distribution				
10-Day Mortality Rate Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%
0	N	3	0.0333	0.0000	0.1768	0.0000	0.0000	0.1000	0.0333	173.21%	3.33%

Graphics

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 2 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID: 20-1079-6322	Endpoint: 10-Day Mortality Rate			CETIS Version: CETISv1.9.6	
Analyzed: 03 Nov-20 19:42	Analysis: Nonparametric-Two Sample			Status Level: 1	
Batch ID: 15-3068-1512	Test Type: 2014 Honeybee Adult Chron Oral			Analyst:	
Start Date: 22 Apr-20	Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day			Diluent:	
Ending Date: 02 May-20	Species: Apis mellifera			Brine:	
Test Length: 10d 0h	Taxon:			Source: Eurofins EAG Agroscience, Age: <48	
Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C < T	96.4	193	136.4	49.31%

Mann-Whitney U Two-Sample Test

Control	vs	Conc-mg ai/k	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision($\alpha:5\%$)
Negative Control		48.5	6.5	n/a	2	4	Exact	0.3500	Non-Significant Effect
		96.4	7.5	n/a	1	4	Exact	0.2000	Non-Significant Effect
		193*	9	n/a	0	4	Exact	0.0500	Significant Effect
		366*	9	n/a	0	4	Exact	0.0500	Significant Effect
		660*	9	n/a	0	4	Exact	0.0500	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Between	2.18444	0.436889	5	5.825	0.0059	Significant Effect
Error	0.9	0.075	12			
Total	3.08444		17			

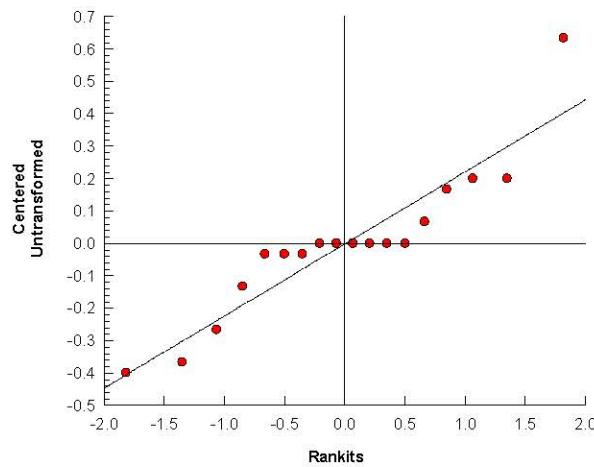
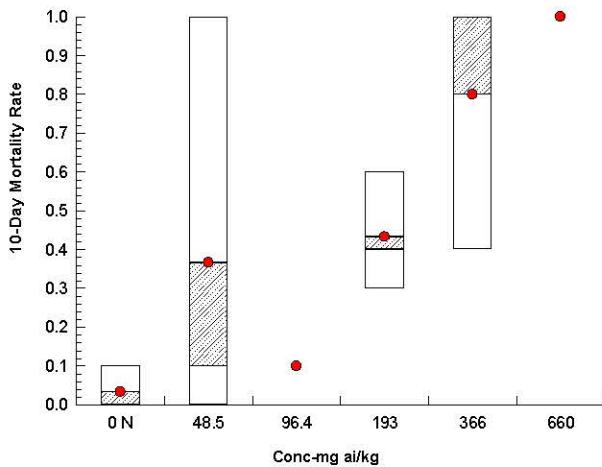
ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision($\alpha:1\%$)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.8834	0.8546	0.0298	Normal Distribution

10-Day Mortality Rate Summary

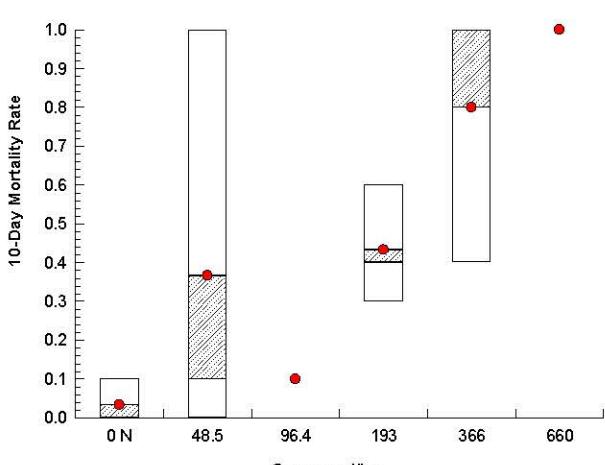
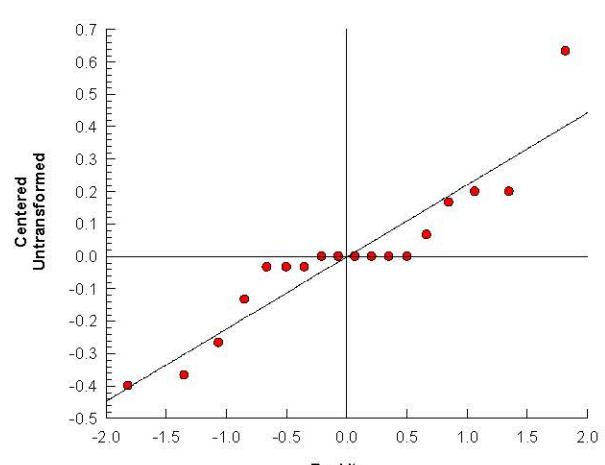
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	3	0.0333	0.0000	0.1768	0.0000	0.0000	0.1000	0.0333	173.21%	0.00%
48.5		3	0.3667	0.0000	1.0000	0.1000	0.0000	1.0000	0.3180	150.21%	34.48%
96.4		3	0.1000	0.0999	0.1001	0.1000	0.1000	0.1000	0.0000	0.00%	6.90%
193		3	0.4333	0.0539	0.8128	0.4000	0.3000	0.6000	0.0882	35.25%	41.38%
366		3	0.8000	0.0000	1.0000	1.0000	0.4000	1.0000	0.2000	43.30%	79.31%
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	100.00%

Graphics



CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 3 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

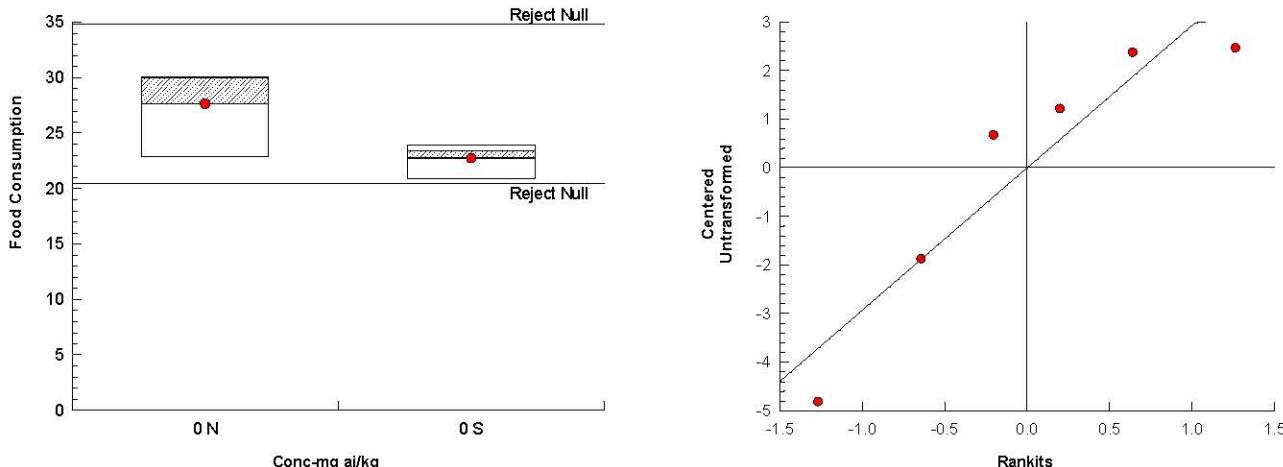
Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study							Eurofins EAG Agroscience, LLC					
Analysis ID: 20-3573-8147	Endpoint: 10-Day Mortality Rate				CETIS Version:	CETISv1.9.6						
Analyzed: 03 Nov-20 19:43	Analysis: Nonparametric-Control vs Ord. Treatments				Status Level:	1						
Batch ID: 15-3068-1512	Test Type: 2014 Honeybee Adult Chron Oral				Analyst:							
Start Date: 22 Apr-20	Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day				Diluent:							
Ending Date: 02 May-20	Species: Apis mellifera				Brine:							
Test Length: 10d 0h	Taxon:				Source:	Eurofins EAG Agroscience, Age: <48						
Data Transform	Alt Hyp				NOEL	LOEL	TOEL	TU				
Untransformed	C < T				96.4	193	136.4					
Jonckheere-Terpstra Step-Down Test												
Control	vs	Conc-mg ai/k	Test Stat	Critical	Ties	P-Type	P-Value	Decision($\alpha:5\%$)				
Negative Control		48.5	0.9428	1.645	2	Asymp	0.1729	Non-Significant Effect				
		96.4	1.248	1.645	2	Asymp	0.1060	Non-Significant Effect				
		193*	2.31	1.645	2	Asymp	0.0105	Significant Effect				
		366*	3.13	1.645	4	Asymp	8.7E-04	Significant Effect				
		660*	3.828	1.645	4	Asymp	6.5E-05	Significant Effect				
ANOVA Table												
Source		Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)					
Between		2.18444	0.436889	5	5.825	0.0059	Significant Effect					
Error		0.9	0.075	12								
Total		3.08444		17								
ANOVA Assumptions Tests												
Attribute	Test			Test Stat	Critical	P-Value	Decision($\alpha:1\%$)					
Variance	Bartlett Equality of Variance Test						Indeterminate					
Distribution	Shapiro-Wilk W Normality Test			0.8834	0.8546	0.0298	Normal Distribution					
10-Day Mortality Rate Summary												
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.0000	0.1000	0.0333	173.21%	0.00%	
48.5		3	0.3667	0.0000	1.0000	0.1000	0.0000	1.0000	0.3180	150.21%	34.48%	
96.4		3	0.1000	0.0999	0.1001	0.1000	0.1000	0.1000	0.0000	0.00%	6.90%	
193		3	0.4333	0.0539	0.8128	0.4000	0.3000	0.6000	0.0882	35.25%	41.38%	
366		3	0.8000	0.0000	1.0000	1.0000	0.4000	1.0000	0.2000	43.30%	79.31%	
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	100.00%	
Graphics												
												
												

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 4 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study					Eurofins EAG Agroscience, LLC						
Analysis ID:		20-1021-1788	Endpoint:		Food Consumption	CETIS Version:		CETISv1.9.6			
Analyzed:		03 Nov-20 19:42	Analysis:		Parametric-Two Sample	Status Level:		1			
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral		Analyst:						
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day		Diluent:						
Ending Date:	02 May-20	Species:	Apis mellifera		Brine:						
Test Length:	10d 0h	Taxon:			Source:	Eurofins EAG Agroscience, Age: <48					
Data Transform		Alt Hyp	Comparison Result					PM SD			
Untransformed		C <> T	Solvent Blank passed food consumption					26.08%			
Equal Variance t Two-Sample Test											
Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)		
Negative Control	Solvent Blank		1.888	2.776	7.199	4	CDF	0.1321	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)				
Between	35.9366		35.9366	1	3.563	0.1321	Non-Significant Effect				
Error	40.3429		10.0857	4							
Total	76.2795			5							
ANOVA Assumptions Tests											
Attribute	Test		Test Stat	Critical	P-Value	Decision($\alpha:1\%$)					
Variance	Variance Ratio F Test		6.413	199	0.2698	Equal Variances					
Distribution	Shapiro-Wilk W Normality Test		0.8689	0.43	0.2218	Normal Distribution					
Food Consumption Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	S	3	22.71	18.61	26.81	23.38	20.83	23.92	0.9524	7.26%	0.00%
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	2.412	15.13%	-21.55%

Graphics



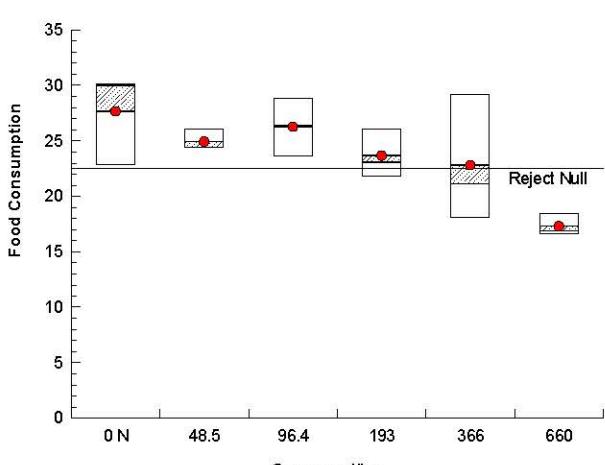
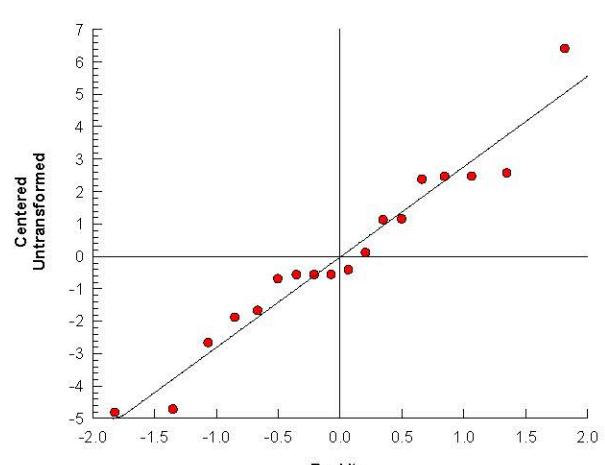
CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 5 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study							Eurofins EAG Agroscience, LLC				
Analysis ID: 15-1707-6337 Analyzed: 03 Nov-20 19:43	Endpoint: Food Consumption Analysis: Parametric-Control vs Treatments				CETIS Version: CETISv1.9.6	Status Level: 1					
Batch ID: 15-3068-1512 Start Date: 22 Apr-20 Ending Date: 02 May-20 Test Length: 10d 0h	Test Type: 2014 Honeybee Adult Chron Oral Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day Species: Apis mellifera Taxon:				Analyst:	Diluent:					
Brine:				Source: Eurofins EAG Agroscience, Age: <48							
Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD					
Untransformed	C > T	366	660	491.5	24.24%						
Dunnett Multiple Comparison Test											
Control	vs	Conc-mg ai/k	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)		
Negative Control	48.5	1.013	2.502	6.69	4	CDF	0.4201	Non-Significant Effect			
	96.4	0.5236	2.502	6.69	4	CDF	0.6385	Non-Significant Effect			
	193	1.492	2.502	6.69	4	CDF	0.2383	Non-Significant Effect			
	366	1.81	2.502	6.69	4	CDF	0.1522	Non-Significant Effect			
	660*	3.869	2.502	6.69	4	CDF	0.0045	Significant Effect			
ANOVA Table											
Source	Sum Squares		Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)				
Between	195.875		39.175	5	3.654	0.0306	Significant Effect				
Error	128.67		10.7225	12							
Total	324.545			17							
ANOVA Assumptions Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision($\alpha:1\%$)				
Variance	Bartlett Equality of Variance Test			7.349	15.09	0.1959	Equal Variances				
Distribution	Shapiro-Wilk W Normality Test			0.9561	0.8546	0.5293	Normal Distribution				
Food Consumption Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	2.412	15.13%	0.00%
48.5		3	24.89	22.43	27.36	24.32	24.32	26.04	0.5727	3.98%	9.81%
96.4		3	26.2	19.69	32.72	26.31	23.53	28.77	1.514	10.01%	5.07%
193		3	23.61	18.06	29.17	23.05	21.72	26.08	1.291	9.47%	14.45%
366		3	22.76	8.482	37.05	21.09	18.04	29.17	3.319	25.26%	17.53%
660		3	17.26	14.82	19.7	16.84	16.56	18.38	0.5676	5.70%	37.47%
Graphics											

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 6 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study							Eurofins EAG Agroscience, LLC				
Analysis ID: 16-1878-0192	Endpoint: Food Consumption					CETIS Version: CETISv1.9.6					
Analyzed: 03 Nov-20 19:43	Analysis: Parametric-Control vs Ord.Treatments					Status Level: 1					
Batch ID: 15-3068-1512	Test Type: 2014 Honeybee Adult Chron Oral					Analyst:					
Start Date: 22 Apr-20	Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day					Diluent:					
Ending Date: 02 May-20	Species: Apis mellifera					Brine:					
Test Length: 10d 0h	Taxon:					Source: Eurofins EAG Agroscience, Age: <48					
Data Transform	Alt Hyp					NOEL	LOEL	TOEL	TU		
Untransformed	C > T					366	660	491.5	18.66%		
Williams Multiple Comparison Test											
Control	vs	Conc-mg ai/k	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)		
Negative Control		48.5	1.013	1.782	4.764	4	CDF	>0.05	Non-Significant Effect		
		96.4	0.7684	1.873	5.008	4	CDF	>0.05	Non-Significant Effect		
		193	1.492	1.903	5.088	4	CDF	>0.05	Non-Significant Effect		
		366	1.81	1.918	5.128	4	CDF	>0.05	Non-Significant Effect		
		660*	3.869	1.927	5.152	4	CDF	<0.05	Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision($\alpha:5\%$)			
Between	195.875		39.175		5	3.654	0.0306	Significant Effect			
Error	128.67		10.7225		12						
Total	324.545				17						
ANOVA Assumptions Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision($\alpha:1\%$)				
Variance	Bartlett Equality of Variance Test			7.349	15.09	0.1959	Equal Variances				
Distribution	Shapiro-Wilk W Normality Test			0.9561	0.8546	0.5293	Normal Distribution				
Food Consumption Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err		
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	2.412		
48.5		3	24.89	22.43	27.36	24.32	24.32	26.04	0.5727		
96.4		3	26.2	19.69	32.72	26.31	23.53	28.77	1.514		
193		3	23.61	18.06	29.17	23.05	21.72	26.08	1.291		
366		3	22.76	8.482	37.05	21.09	18.04	29.17	3.319		
660		3	17.26	14.82	19.7	16.84	16.56	18.38	0.5676		
Graphics											
											
											

CETIS Summary Report

 Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:
Test Length:	10d 0h	Taxon:		Source: Eurofins EAG Agroscience, Age: <48
Sample ID:	12-5085-6504	Code:	51195301 dc	Project: Herbicide
Sample Date:	22 Apr-20	Material:	Acetochlor	Source: Sharda Cropchem Limited
Receipt Date:		CAS (PC):		Station:
Sample Age:	n/a	Client:	CDM Smith	

121601 51195301 mean-measured diet concentrations, record created by: J. Burns. CETIS Comments: '10-Day Mortality Rate' endpoint...

Error with Log-Normal (Probit) Model:

The slope is not significantly different from zero, therefore confidence limits are unavailable.

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
18-0339-4887	10-Day Mortality Rate	Equal Variance t Two-Sample Test	0.3739	Solvent Blank passed 10-day mortality rate	1
20-1021-1788	Food Consumption	Equal Variance t Two-Sample Test	0.1321	Solvent Blank passed food consumption	1

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	TU	PM SD	S
20-3573-8147	10-Day Mortality Rate	Jonckheere-Terpstra Step-Down Test	96.4	193	136.4		n/a	1
20-1079-6322	10-Day Mortality Rate	Mann-Whitney U Two-Sample Test	96.4	193	136.4		49.3%	1
15-1707-6337	Food Consumption	Dunnett Multiple Comparison Test	366	660	491.5		24.2%	1
16-1878-0192	Food Consumption	Williams Multiple Comparison Test	366	660	491.5		18.7%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	mg ai/kg	95% LCL	95% UCL	TU	S
19-7252-4680	10-Day Mortality Rate	GLM: Log-Normal (Probit)	EC5	125.6	n/a	n/a		1
			EC10	146.6	n/a	n/a		
			EC25	189.9	n/a	n/a		
			EC50	253.2	n/a	n/a		
11-4422-8897	10-Day Mortality Rate	Trimmed Spearman-Kärber	EC50	210	165.7	266.1		1
05-9706-9298	Food Consumption	NLR: 3P Cum Log-Normal (Probit)	EC5	155	n/a	305.8		1
			EC10	239.9	n/a	419.2		
			EC25	497.7	322.6	703.8		
			EC50	1120	424.5	2954		

10-Day Mortality Rate Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.1000	0.0333	0.0577	173.21%	3.33%
48.5		3	0.3667	0.0000	1.0000	0.0000	1.0000	0.3180	0.5508	150.21%	36.67%
96.4		3	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	10.00%
193		3	0.4333	0.0539	0.8128	0.3000	0.6000	0.0882	0.1528	35.25%	43.33%
366		3	0.8000	0.0000	1.0000	0.4000	1.0000	0.2000	0.3464	43.30%	80.00%
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.00%

Food Consumption Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	22.71	18.61	26.81	20.83	23.92	0.9524	1.65	7.26%	0.00%
0	N	3	27.6	17.23	37.98	22.78	30.06	2.412	4.177	15.13%	-21.55%
48.5		3	24.89	22.43	27.36	24.32	26.04	0.5727	0.9919	3.98%	-9.63%
96.4		3	26.2	19.69	32.72	23.53	28.77	1.514	2.623	10.01%	-15.39%
193		3	23.61	18.06	29.17	21.72	26.08	1.291	2.236	9.47%	-3.99%
366		3	22.76	8.482	37.05	18.04	29.17	3.319	5.75	25.26%	-0.25%
660		3	17.26	14.82	19.7	16.56	18.38	0.5676	0.9831	5.70%	24.00%

CETIS Summary ReportReport Date: 03 Nov-20 20:00 (p 2 of 2)
Test Code/ID: 51195301 dc / 07-0057-7497**Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study****Eurofins EAG Agroscience, LLC****10-Day Mortality Rate Detail**

Conc-mg ai/kg	Code	Rep 1	Rep 2	Rep 3
0	S	0.0000	0.0000	0.0000
0	N	0.0000	0.0000	0.1000
48.5		1.0000	0.1000	0.0000
96.4		0.1000	0.1000	0.1000
193		0.6000	0.3000	0.4000
366		1.0000	0.4000	1.0000
660		1.0000	1.0000	1.0000

Food Consumption Detail

Conc-mg ai/kg	Code	Rep 1	Rep 2	Rep 3
0	S	23.92	23.38	20.83
0	N	30.06	22.78	29.97
48.5		24.32	26.04	24.32
96.4		28.77	23.53	26.31
193		21.72	23.05	26.08
366		29.17	18.04	21.09
660		16.84	18.38	16.56

CETIS Summary Report

 Report Date: 03 Nov-20 20:01 (p 1 of 2)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study **Eurofins EAG Agroscience, LLC**

Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:
Test Length:	10d 0h	Taxon:		Source: Eurofins EAG Agroscience, Age: <48
Sample ID:	11-9359-8736	Code:	51195301 dd	Project: Herbicide
Sample Date:	22 Apr-20	Material:	Acetochlor	Source: Sharda Cropchem Limited
Receipt Date:	03 Nov-20 19:46	CAS (PC):		Station:
Sample Age:	n/a	Client:	CDM Smith	

121601 51195301 measured actual intake dietary doses, record created by: J. Burns. CETIS Comments: '10-Day Mortality Rate' endpoint...

Error with Log-Normal (Probit) Model:

The slope is not significantly different from zero, therefore confidence limits are unavailable.

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	ug/bee/da	95% LCL	95% UCL	TU	S
09-8930-2219	10-Day Mortality Rate	GLM: Log-Normal (Probit)	EC5	3.003	n/a	n/a		1
			EC10	3.477	n/a	n/a		
			EC25	4.442	n/a	n/a		
			EC50	5.831	n/a	n/a		
11-5823-4748	10-Day Mortality Rate	Trimmed Spearman-Kärber	EC50	4.928	3.965	6.124		1
11-5307-2149	Food Consumption	NLR: 3P Cum Log-Normal (Probit)	EC5	4.443	n/a	7.872		1
			EC10	6.188	n/a	9.929		
			EC25	10.76	7.587	14.19		
			EC50	19.91	8.513	46.58		

10-Day Mortality Rate Summary

Conc-ug/bee/day	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.1000	0.0333	0.0577	173.21%	3.33%
1.2		3	0.3667	0.0000	1.0000	0.0000	1.0000	0.3180	0.5508	150.21%	36.67%
2.5		3	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	10.00%
4.4		3	0.4333	0.0539	0.8128	0.3000	0.6000	0.0882	0.1528	35.25%	43.33%
8.5		3	0.8000	0.0000	1.0000	0.4000	1.0000	0.2000	0.3464	43.30%	80.00%
13		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.00%

Food Consumption Summary

Conc-ug/bee/day	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	22.71	18.61	26.81	20.83	23.92	0.9524	1.65	7.26%	0.00%
0	N	3	27.6	17.23	37.98	22.78	30.06	2.412	4.177	15.13%	-21.55%
1.2		3	24.89	22.43	27.36	24.32	26.04	0.5727	0.9919	3.98%	-9.63%
2.5		3	26.2	19.69	32.72	23.53	28.77	1.514	2.623	10.01%	-15.39%
4.4		3	23.61	18.06	29.17	21.72	26.08	1.291	2.236	9.47%	-3.99%
8.5		3	22.76	8.482	37.05	18.04	29.17	3.319	5.75	25.26%	-0.25%
13		3	17.26	14.82	19.7	16.56	18.38	0.5676	0.9831	5.70%	24.00%

CETIS Summary ReportReport Date: 03 Nov-20 20:01 (p 2 of 2)
Test Code/ID: 51195301 dd / 09-9266-1609**Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study****Eurofins EAG Agroscience, LLC****10-Day Mortality Rate Detail**

Conc-ug/bee/day	Code	Rep 1	Rep 2	Rep 3
0	S	0.0000	0.0000	0.0000
0	N	0.0000	0.0000	0.1000
1.2		1.0000	0.1000	0.0000
2.5		0.1000	0.1000	0.1000
4.4		0.6000	0.3000	0.4000
8.5		1.0000	0.4000	1.0000
13		1.0000	1.0000	1.0000

Food Consumption Detail

Conc-ug/bee/day	Code	Rep 1	Rep 2	Rep 3
0	S	23.92	23.38	20.83
0	N	30.06	22.78	29.97
1.2		24.32	26.04	24.32
2.5		28.77	23.53	26.31
4.4		21.72	23.05	26.08
8.5		29.17	18.04	21.09
13		16.84	18.38	16.56

CETIS Summary Report

 Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:
Test Length:	10d 0h	Taxon:		Source: Eurofins EAG Agroscience, Age: <48
Sample ID:	12-5085-6504	Code:	51195301 dc	Project: Herbicide
Sample Date:	22 Apr-20	Material:	Acetochlor	Source: Sharda Cropchem Limited
Receipt Date:		CAS (PC):		Station:
Sample Age:	n/a	Client:	CDM Smith	

121601 51195301 mean-measured diet concentrations, record created by: J. Burns. CETIS Comments: '10-Day Mortality Rate' endpoint...

Error with Log-Normal (Probit) Model:

The slope is not significantly different from zero, therefore confidence limits are unavailable.

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
18-0339-4887	10-Day Mortality Rate	Equal Variance t Two-Sample Test	0.3739	Solvent Blank passed 10-day mortality rate	1
20-1021-1788	Food Consumption	Equal Variance t Two-Sample Test	0.1321	Solvent Blank passed food consumption	1

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	TU	PM SD	S
20-3573-8147	10-Day Mortality Rate	Jonckheere-Terpstra Step-Down Test	96.4	193	136.4		n/a	1
20-1079-6322	10-Day Mortality Rate	Mann-Whitney U Two-Sample Test	96.4	193	136.4		49.3%	1
15-1707-6337	Food Consumption	Dunnett Multiple Comparison Test	366	660	491.5		24.2%	1
16-1878-0192	Food Consumption	Williams Multiple Comparison Test	366	660	491.5		18.7%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	mg ai/kg	95% LCL	95% UCL	TU	S
19-7252-4680	10-Day Mortality Rate	GLM: Log-Normal (Probit)	EC5	125.6	n/a	n/a		1
			EC10	146.6	n/a	n/a		
			EC25	189.9	n/a	n/a		
			EC50	253.2	n/a	n/a		
11-4422-8897	10-Day Mortality Rate	Trimmed Spearman-Kärber	EC50	210	165.7	266.1		1
05-9706-9298	Food Consumption	NLR: 3P Cum Log-Normal (Probit)	EC5	155	n/a	305.8		1
			EC10	239.9	n/a	419.2		
			EC25	497.7	322.6	703.8		
			EC50	1120	424.5	2954		

10-Day Mortality Rate Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.1000	0.0333	0.0577	173.21%	3.33%
48.5		3	0.3667	0.0000	1.0000	0.0000	1.0000	0.3180	0.5508	150.21%	36.67%
96.4		3	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	10.00%
193		3	0.4333	0.0539	0.8128	0.3000	0.6000	0.0882	0.1528	35.25%	43.33%
366		3	0.8000	0.0000	1.0000	0.4000	1.0000	0.2000	0.3464	43.30%	80.00%
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.00%

Food Consumption Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	22.71	18.61	26.81	20.83	23.92	0.9524	1.65	7.26%	0.00%
0	N	3	27.6	17.23	37.98	22.78	30.06	2.412	4.177	15.13%	-21.55%
48.5		3	24.89	22.43	27.36	24.32	26.04	0.5727	0.9919	3.98%	-9.63%
96.4		3	26.2	19.69	32.72	23.53	28.77	1.514	2.623	10.01%	-15.39%
193		3	23.61	18.06	29.17	21.72	26.08	1.291	2.236	9.47%	-3.99%
366		3	22.76	8.482	37.05	18.04	29.17	3.319	5.75	25.26%	-0.25%
660		3	17.26	14.82	19.7	16.56	18.38	0.5676	0.9831	5.70%	24.00%

CETIS Summary ReportReport Date: 03 Nov-20 20:00 (p 2 of 2)
Test Code/ID: 51195301 dc / 07-0057-7497**Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study****Eurofins EAG Agroscience, LLC****10-Day Mortality Rate Detail**

Conc-mg ai/kg	Code	Rep 1	Rep 2	Rep 3
0	S	0.0000	0.0000	0.0000
0	N	0.0000	0.0000	0.1000
48.5		1.0000	0.1000	0.0000
96.4		0.1000	0.1000	0.1000
193		0.6000	0.3000	0.4000
366		1.0000	0.4000	1.0000
660		1.0000	1.0000	1.0000

Food Consumption Detail

Conc-mg ai/kg	Code	Rep 1	Rep 2	Rep 3
0	S	23.92	23.38	20.83
0	N	30.06	22.78	29.97
48.5		24.32	26.04	24.32
96.4		28.77	23.53	26.31
193		21.72	23.05	26.08
366		29.17	18.04	21.09
660		16.84	18.38	16.56

CETIS Summary Report

 Report Date: 03 Nov-20 20:01 (p 1 of 2)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study **Eurofins EAG Agroscience, LLC**

Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:
Test Length:	10d 0h	Taxon:		Source: Eurofins EAG Agroscience, Age: <48
Sample ID:	11-9359-8736	Code:	51195301 dd	Project: Herbicide
Sample Date:	22 Apr-20	Material:	Acetochlor	Source: Sharda Cropchem Limited
Receipt Date:	03 Nov-20 19:46	CAS (PC):		Station:
Sample Age:	n/a	Client:	CDM Smith	

121601 51195301 measured actual intake dietary doses, record created by: J. Burns. CETIS Comments: '10-Day Mortality Rate' endpoint...

Error with Log-Normal (Probit) Model:

The slope is not significantly different from zero, therefore confidence limits are unavailable.

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	ug/bee/da	95% LCL	95% UCL	TU	S
09-8930-2219	10-Day Mortality Rate	GLM: Log-Normal (Probit)	EC5	3.003	n/a	n/a		1
			EC10	3.477	n/a	n/a		
			EC25	4.442	n/a	n/a		
			EC50	5.831	n/a	n/a		
11-5823-4748	10-Day Mortality Rate	Trimmed Spearman-Kärber	EC50	4.928	3.965	6.124		1
11-5307-2149	Food Consumption	NLR: 3P Cum Log-Normal (Probit)	EC5	4.443	n/a	7.872		1
			EC10	6.188	n/a	9.929		
			EC25	10.76	7.587	14.19		
			EC50	19.91	8.513	46.58		

10-Day Mortality Rate Summary

Conc-ug/bee/day	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%	
0	N	3	0.0333	0.0000	0.1768	0.0000	0.1000	0.0333	0.0577	173.21%	3.33%
1.2		3	0.3667	0.0000	1.0000	0.0000	1.0000	0.3180	0.5508	150.21%	36.67%
2.5		3	0.1000	0.1000	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	10.00%
4.4		3	0.4333	0.0539	0.8128	0.3000	0.6000	0.0882	0.1528	35.25%	43.33%
8.5		3	0.8000	0.0000	1.0000	0.4000	1.0000	0.2000	0.3464	43.30%	80.00%
13		3	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.00%

Food Consumption Summary

Conc-ug/bee/day	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	S	3	22.71	18.61	26.81	20.83	23.92	0.9524	1.65	7.26%	0.00%
0	N	3	27.6	17.23	37.98	22.78	30.06	2.412	4.177	15.13%	-21.55%
1.2		3	24.89	22.43	27.36	24.32	26.04	0.5727	0.9919	3.98%	-9.63%
2.5		3	26.2	19.69	32.72	23.53	28.77	1.514	2.623	10.01%	-15.39%
4.4		3	23.61	18.06	29.17	21.72	26.08	1.291	2.236	9.47%	-3.99%
8.5		3	22.76	8.482	37.05	18.04	29.17	3.319	5.75	25.26%	-0.25%
13		3	17.26	14.82	19.7	16.56	18.38	0.5676	0.9831	5.70%	24.00%

CETIS Summary ReportReport Date: 03 Nov-20 20:01 (p 2 of 2)
Test Code/ID: 51195301 dd / 09-9266-1609**Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study****Eurofins EAG Agroscience, LLC****10-Day Mortality Rate Detail**

Conc-ug/bee/day	Code	Rep 1	Rep 2	Rep 3
0	S	0.0000	0.0000	0.0000
0	N	0.0000	0.0000	0.1000
1.2		1.0000	0.1000	0.0000
2.5		0.1000	0.1000	0.1000
4.4		0.6000	0.3000	0.4000
8.5		1.0000	0.4000	1.0000
13		1.0000	1.0000	1.0000

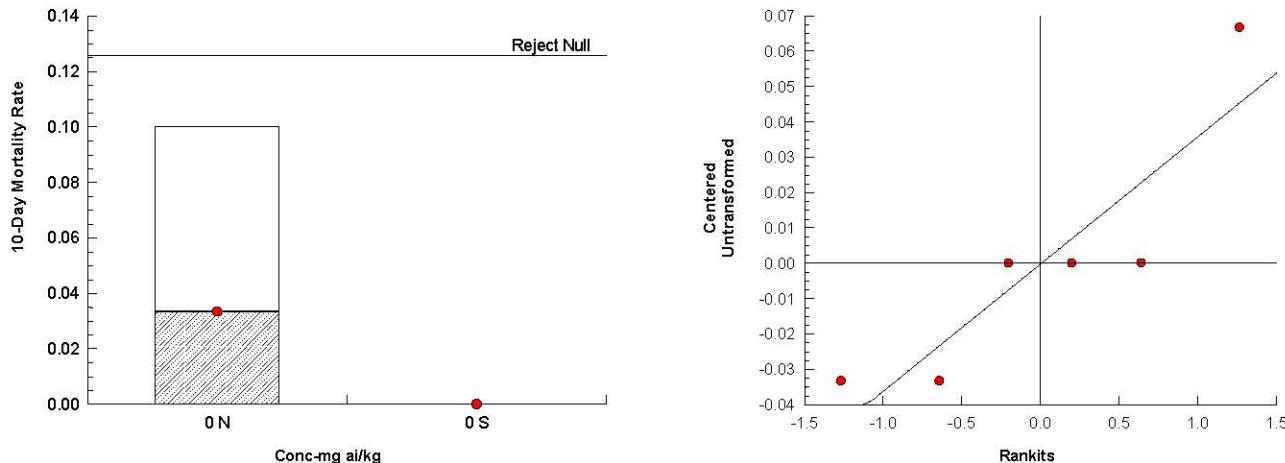
Food Consumption Detail

Conc-ug/bee/day	Code	Rep 1	Rep 2	Rep 3
0	S	23.92	23.38	20.83
0	N	30.06	22.78	29.97
1.2		24.32	26.04	24.32
2.5		28.77	23.53	26.31
4.4		21.72	23.05	26.08
8.5		29.17	18.04	21.09
13		16.84	18.38	16.56

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 1 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study					Eurofins EAG Agroscience, LLC						
Analysis ID: 18-0339-4887 Analyzed: 03 Nov-20 19:42	Endpoint: 10-Day Mortality Rate Analysis: Parametric-Two Sample				CETIS Version: CETISv1.9.6 Status Level: 1						
Batch ID: 15-3068-1512 Start Date: 22 Apr-20 Ending Date: 02 May-20 Test Length: 10d 0h	Test Type: 2014 Honeybee Adult Chron Oral Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day Species: Apis mellifera Taxon:				Analyst: Diluent: Brine: Source: Eurofins EAG Agroscience, Age: <48						
Data Transform	Alt Hyp				Comparison Result						
Untransformed	C <> T				Solvent Blank passed 10-day mortality rate	9.57%					
Equal Variance t Two-Sample Test											
Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α :5%)		
Negative Control		Solvent Blank	1	2.776	0.093	4	CDF	0.3739	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat		P-Value	Decision(α :5%)		
Between	0.0016667		0.0016667		1	1		0.3739	Non-Significant Effect		
Error	0.0066667		0.0016667		4						
Total	0.0083333				5						
ANOVA Assumptions Tests											
Attribute	Test			Test Stat	Critical	P-Value		Decision(α :1%)			
Variance	Variance Ratio F Test						Indeterminate				
Distribution	Shapiro-Wilk W Normality Test			0.8137	0.43	0.0778		Normal Distribution			
10-Day Mortality Rate Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	S	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00%
0	N	3	0.0333	0.0000	0.1768	0.0000	0.0000	0.1000	0.0333	173.21%	3.33%

Graphics

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 2 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID: 20-1079-6322	Endpoint: 10-Day Mortality Rate			CETIS Version: CETISv1.9.6	
Analyzed: 03 Nov-20 19:42	Analysis: Nonparametric-Two Sample			Status Level: 1	
Batch ID: 15-3068-1512	Test Type: 2014 Honeybee Adult Chron Oral			Analyst:	
Start Date: 22 Apr-20	Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day			Diluent:	
Ending Date: 02 May-20	Species: Apis mellifera			Brine:	
Test Length: 10d 0h	Taxon:			Source: Eurofins EAG Agroscience, Age: <48	
Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C < T	96.4	193	136.4	49.31%

Mann-Whitney U Two-Sample Test

Control	vs	Conc-mg ai/k	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision($\alpha:5\%$)
Negative Control		48.5	6.5	n/a	2	4	Exact	0.3500	Non-Significant Effect
		96.4	7.5	n/a	1	4	Exact	0.2000	Non-Significant Effect
		193*	9	n/a	0	4	Exact	0.0500	Significant Effect
		366*	9	n/a	0	4	Exact	0.0500	Significant Effect
		660*	9	n/a	0	4	Exact	0.0500	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Between	2.18444	0.436889	5	5.825	0.0059	Significant Effect
Error	0.9	0.075	12			
Total	3.08444		17			

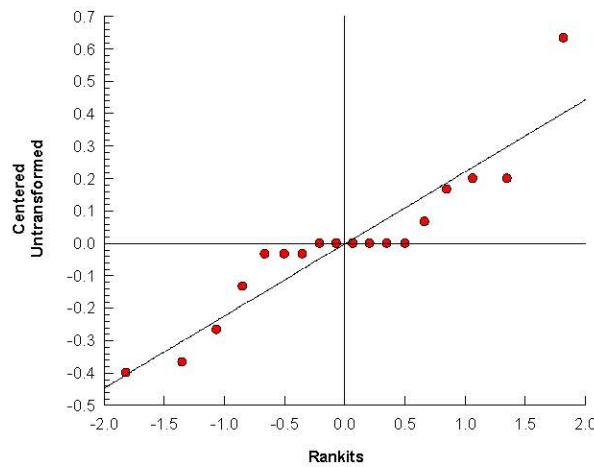
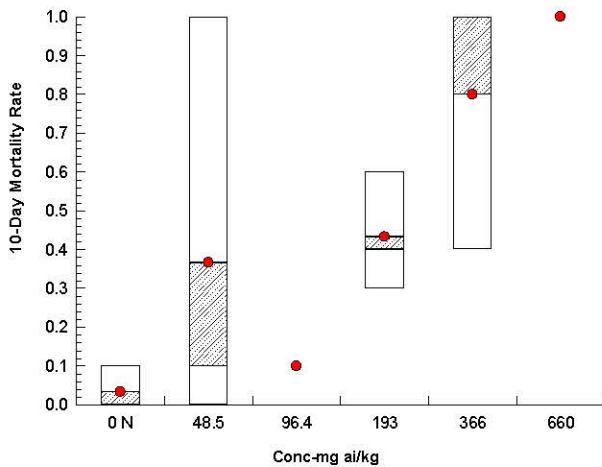
ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision($\alpha:1\%$)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.8834	0.8546	0.0298	Normal Distribution

10-Day Mortality Rate Summary

Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	3	0.0333	0.0000	0.1768	0.0000	0.0000	0.1000	0.0333	173.21%	0.00%
48.5		3	0.3667	0.0000	1.0000	0.1000	0.0000	1.0000	0.3180	150.21%	34.48%
96.4		3	0.1000	0.0999	0.1001	0.1000	0.1000	0.1000	0.0000	0.00%	6.90%
193		3	0.4333	0.0539	0.8128	0.4000	0.3000	0.6000	0.0882	35.25%	41.38%
366		3	0.8000	0.0000	1.0000	1.0000	0.4000	1.0000	0.2000	43.30%	79.31%
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	100.00%

Graphics

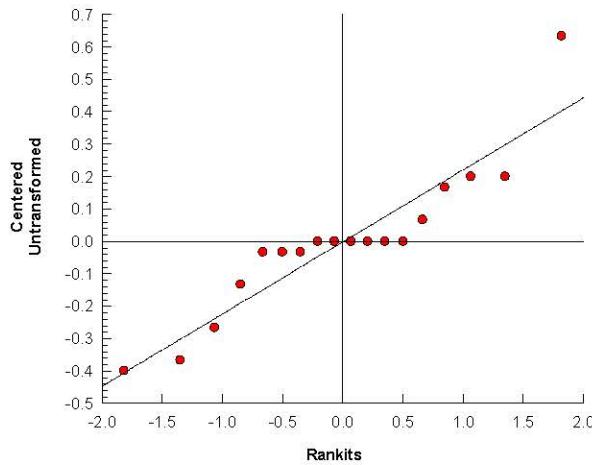
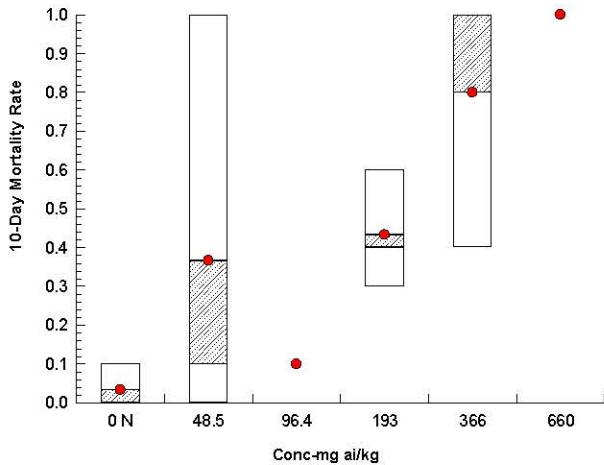


CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 3 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

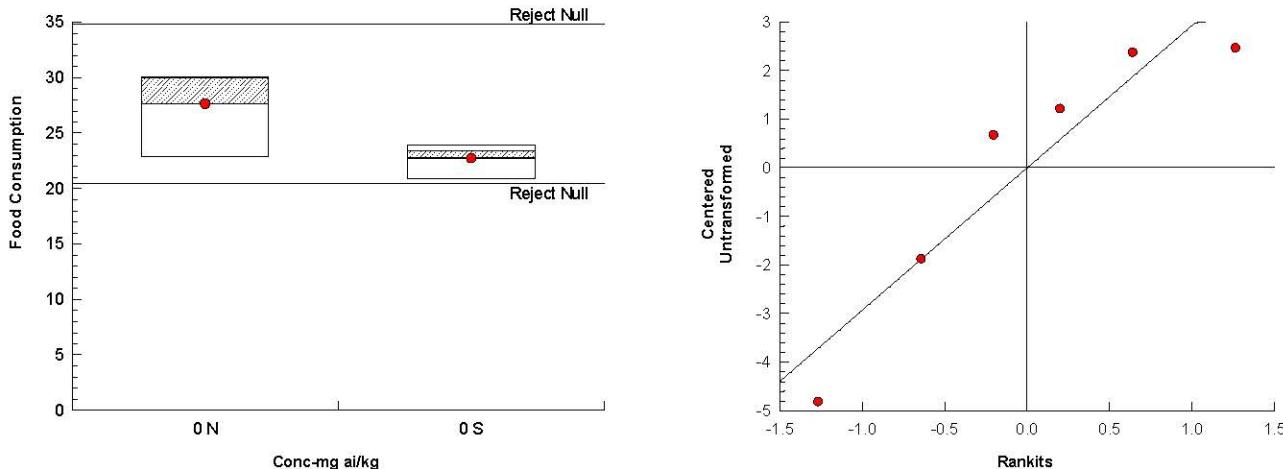
Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study							Eurofins EAG Agroscience, LLC				
Analysis ID: 20-3573-8147 Analyzed: 03 Nov-20 19:43	Endpoint: 10-Day Mortality Rate Analysis: Nonparametric-Control vs Ord. Treatments			CETIS Version: CETISv1.9.6	Status Level: 1						
Batch ID: 15-3068-1512 Start Date: 22 Apr-20 Ending Date: 02 May-20 Test Length: 10d 0h	Test Type: 2014 Honeybee Adult Chron Oral Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day Species: Apis mellifera Taxon:			Analyst:	Diluent: Brine: Source: Eurofins EAG Agroscience, Age: <48						
Data Transform	Alt Hyp			NOEL	LOEL	TOEL	TU				
Untransformed	C < T			96.4	193	136.4					
Jonckheere-Terpstra Step-Down Test											
Control	vs	Conc-mg ai/k	Test Stat	Critical	Ties	P-Type	P-Value	Decision($\alpha:5\%$)			
Negative Control		48.5	0.9428	1.645	2	Asymp	0.1729	Non-Significant Effect			
		96.4	1.248	1.645	2	Asymp	0.1060	Non-Significant Effect			
		193*	2.31	1.645	2	Asymp	0.0105	Significant Effect			
		366*	3.13	1.645	4	Asymp	8.7E-04	Significant Effect			
		660*	3.828	1.645	4	Asymp	6.5E-05	Significant Effect			
ANOVA Table											
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)					
Between	2.18444	0.436889	5	5.825	0.0059	Significant Effect					
Error	0.9	0.075	12								
Total	3.08444		17								
ANOVA Assumptions Tests											
Attribute	Test		Test Stat	Critical	P-Value	Decision($\alpha:1\%$)					
Variance	Bartlett Equality of Variance Test					Indeterminate					
Distribution	Shapiro-Wilk W Normality Test		0.8834	0.8546	0.0298	Normal Distribution					
10-Day Mortality Rate Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	3	0.0333	0.0000	0.1768	0.0000	0.0000	0.1000	0.0333	173.21%	0.00%
48.5		3	0.3667	0.0000	1.0000	0.1000	0.0000	1.0000	0.3180	150.21%	34.48%
96.4		3	0.1000	0.0999	0.1001	0.1000	0.1000	0.1000	0.0000	0.00%	6.90%
193		3	0.4333	0.0539	0.8128	0.4000	0.3000	0.6000	0.0882	35.25%	41.38%
366		3	0.8000	0.0000	1.0000	1.0000	0.4000	1.0000	0.2000	43.30%	79.31%
660		3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	100.00%

Graphics



CETIS Analytical ReportReport Date: 03 Nov-20 19:58 (p 4 of 6)
Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study					Eurofins EAG Agroscience, LLC						
Analysis ID:		20-1021-1788	Endpoint:		Food Consumption	CETIS Version:		CETISv1.9.6			
Analyzed:		03 Nov-20 19:42	Analysis:		Parametric-Two Sample	Status Level:		1			
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral		Analyst:						
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day		Diluent:						
Ending Date:	02 May-20	Species:	Apis mellifera		Brine:						
Test Length:	10d 0h	Taxon:			Source:	Eurofins EAG Agroscience, Age: <48					
Data Transform		Alt Hyp	Comparison Result					PM SD			
Untransformed		C <> T	Solvent Blank passed food consumption					26.08%			
Equal Variance t Two-Sample Test											
Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)		
Negative Control	Solvent Blank	1.888	2.776	7.199	4	CDF		0.1321	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)				
Between	35.9366		35.9366	1	3.563	0.1321	Non-Significant Effect				
Error	40.3429		10.0857	4							
Total	76.2795			5							
ANOVA Assumptions Tests											
Attribute	Test		Test Stat	Critical	P-Value	Decision($\alpha:1\%$)					
Variance	Variance Ratio F Test		6.413	199	0.2698	Equal Variances					
Distribution	Shapiro-Wilk W Normality Test		0.8689	0.43	0.2218	Normal Distribution					
Food Consumption Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	S	3	22.71	18.61	26.81	23.38	20.83	23.92	0.9524	7.26%	0.00%
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	2.412	15.13%	-21.55%

Graphics

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 5 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study							Eurofins EAG Agroscience, LLC				
Analysis ID: 15-1707-6337 Analyzed: 03 Nov-20 19:43	Endpoint: Food Consumption Analysis: Parametric-Control vs Treatments				CETIS Version: CETISv1.9.6	Status Level: 1					
Batch ID: 15-3068-1512 Start Date: 22 Apr-20 Ending Date: 02 May-20 Test Length: 10d 0h	Test Type: 2014 Honeybee Adult Chron Oral Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day Species: Apis mellifera Taxon:				Analyst:	Diluent:					
Brine:				Source: Eurofins EAG Agroscience, Age: <48							
Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD					
Untransformed	C > T	366	660	491.5	24.24%						
Dunnett Multiple Comparison Test											
Control	vs	Conc-mg ai/k	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)		
Negative Control	48.5	1.013	2.502	6.69	4	CDF	0.4201	Non-Significant Effect			
	96.4	0.5236	2.502	6.69	4	CDF	0.6385	Non-Significant Effect			
	193	1.492	2.502	6.69	4	CDF	0.2383	Non-Significant Effect			
	366	1.81	2.502	6.69	4	CDF	0.1522	Non-Significant Effect			
	660*	3.869	2.502	6.69	4	CDF	0.0045	Significant Effect			
ANOVA Table											
Source	Sum Squares		Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)				
Between	195.875		39.175	5	3.654	0.0306	Significant Effect				
Error	128.67		10.7225	12							
Total	324.545			17							
ANOVA Assumptions Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision($\alpha:1\%$)				
Variance	Bartlett Equality of Variance Test			7.349	15.09	0.1959	Equal Variances				
Distribution	Shapiro-Wilk W Normality Test			0.9561	0.8546	0.5293	Normal Distribution				
Food Consumption Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	2.412	15.13%	0.00%
48.5		3	24.89	22.43	27.36	24.32	24.32	26.04	0.5727	3.98%	9.81%
96.4		3	26.2	19.69	32.72	26.31	23.53	28.77	1.514	10.01%	5.07%
193		3	23.61	18.06	29.17	23.05	21.72	26.08	1.291	9.47%	14.45%
366		3	22.76	8.482	37.05	21.09	18.04	29.17	3.319	25.26%	17.53%
660		3	17.26	14.82	19.7	16.84	16.56	18.38	0.5676	5.70%	37.47%
Graphics											

CETIS Analytical Report

Report Date: 03 Nov-20 19:58 (p 6 of 6)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study							Eurofins EAG Agroscience, LLC				
Analysis ID: 16-1878-0192	Endpoint: Food Consumption					CETIS Version: CETISv1.9.6					
Analyzed: 03 Nov-20 19:43	Analysis: Parametric-Control vs Ord.Treatments					Status Level: 1					
Batch ID: 15-3068-1512	Test Type: 2014 Honeybee Adult Chron Oral					Analyst:					
Start Date: 22 Apr-20	Protocol: Honeybee Adult Chronic Oral Toxicity, 10-day					Diluent:					
Ending Date: 02 May-20	Species: Apis mellifera					Brine:					
Test Length: 10d 0h	Taxon:					Source: Eurofins EAG Agroscience, Age: <48					
Data Transform	Alt Hyp					NOEL	LOEL	TOEL	TU		
Untransformed	C > T					366	660	491.5	18.66%		
Williams Multiple Comparison Test											
Control	vs	Conc-mg ai/k	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)		
Negative Control	48.5	48.5	1.013	1.782	4.764	4	CDF	>0.05	Non-Significant Effect		
	96.4	96.4	0.7684	1.873	5.008	4	CDF	>0.05	Non-Significant Effect		
	193	193	1.492	1.903	5.088	4	CDF	>0.05	Non-Significant Effect		
	366	366	1.81	1.918	5.128	4	CDF	>0.05	Non-Significant Effect		
	660*	660*	3.869	1.927	5.152	4	CDF	<0.05	Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision($\alpha:5\%$)			
Between	195.875		39.175		5	3.654	0.0306	Significant Effect			
Error	128.67		10.7225		12						
Total	324.545				17						
ANOVA Assumptions Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision($\alpha:1\%$)				
Variance	Bartlett Equality of Variance Test			7.349	15.09	0.1959	Equal Variances				
Distribution	Shapiro-Wilk W Normality Test			0.9561	0.8546	0.5293	Normal Distribution				
Food Consumption Summary											
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err		
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	2.412		
48.5		3	24.89	22.43	27.36	24.32	24.32	26.04	0.5727		
96.4		3	26.2	19.69	32.72	26.31	23.53	28.77	1.514		
193		3	23.61	18.06	29.17	23.05	21.72	26.08	1.291		
366		3	22.76	8.482	37.05	21.09	18.04	29.17	3.319		
660		3	17.26	14.82	19.7	16.84	16.56	18.38	0.5676		
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	CV%		
Conc-mg ai/kg	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	%Effect		
0	N	3	27.6	17.23	37.98	29.97	22.78	30.06	15.13%		
48.5		3	24.89	22.43	27.36	24.32	24.32	26.04	3.98%		
96.4		3	26.2	19.69	32.72	26.31	23.53	28.77	10.01%		
193		3	23.61	18.06	29.17	23.05	21.72	26.08	9.47%		
366		3	22.76	8.482	37.05	21.09	18.04	29.17	25.26%		
660		3	17.26	14.82	19.7	16.84	16.56	18.38	17.53%		
									37.47%		
Graphics											

CETIS Analytical Report

Report Date: 03 Nov-20 19:59 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	19-7252-4680	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:43	Analysis:	Linear Regression (GLM)	Status Level:	1
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Linear Regression Options

Model Name	Link Function	Threshold Option	Thresh	Optimize	Pooled	Het Corr	Weighted
Log-Normal (Probit)	$\eta = \text{inv } \Phi[\pi]$	Contrd Threshold	0.169503	Yes	No	Yes	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	PM SD	F Stat	P-Value	Decision($\alpha:5\%$)
15	-44.5	96.72	97.67	2.403483	0.1852031	0.5933	24.30%	0.9119	0.4642	Non-Sig Lack of Fit

Point Estimates

Level	mg ai/kg	95% LCL	95% UCL
EC5	125.6	n/a	n/a
EC10	146.6	n/a	n/a
EC25	189.9	n/a	n/a
EC50	253.2	n/a	n/a

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	Test Stat	P-Value	Decision($\alpha:5\%$)
Threshold	0.1695	0.09468	-0.03231	0.3713	1.79	0.0936	Non-Significant Parameter
Intercept	-12.98	7.024	-27.95	1.993	-1.848	0.0845	Non-Significant Parameter
Slope	5.399	2.834	-0.6416	11.44	1.905	0.0761	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	138.9	69.43	2	13.4	4.6E-04	Significant Effect
Lack of Fit	14.43	4.81	3	0.9119	0.4642	Non-Significant Effect
Pure Error	63.3	5.275	12			
Residual	77.73	5.182	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Model Fit	Likelihood Ratio GOF Test	68.58	25	<1.0E-37	Sig Heterogeneity
	Pearson Chi-Sq GOF Test	77.73	25	<1.0E-37	Sig Heterogeneity
Variance Distribution	Mod Levene Equality of Variance Test	0.9414	4.387	0.5163	Equal Variances
	Anderson-Darling A2 Normality Test	1.495	2.492	1.9E-04	Non-Normal Distribution
Overdispersion	Shapiro-Wilk W Normality Test	0.7937	0.8965	0.0012	Non-Normal Distribution
	Tarone C(α) Binomial Overdispersion	9.951	1.645	<1.0E-37	Sig Overdispersion

10-Day Mortality Rate Summary**Calculated Variate(A/B)**

Conc-mg ai/kg	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	N	3	0.0333	0.0000	0.1000	0.0333	0.0577	173.20%	0.0%	1	30
48.5		3	0.3667	0.0000	1.0000	0.3180	0.5508	150.20%	34.48%	11	30
96.4		3	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	6.9%	3	30
193		3	0.4333	0.3000	0.6000	0.0882	0.1528	35.25%	41.38%	13	30
366		3	0.8000	0.4000	1.0000	0.2000	0.3464	43.30%	79.31%	24	30
660		3	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.0%	30	30

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

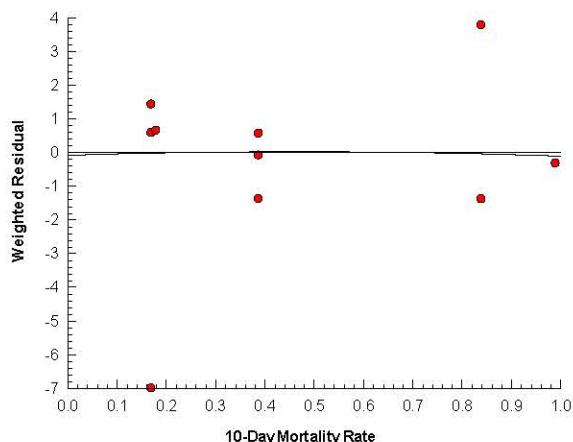
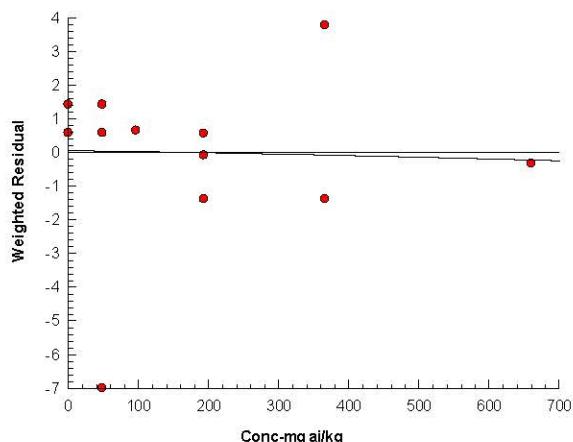
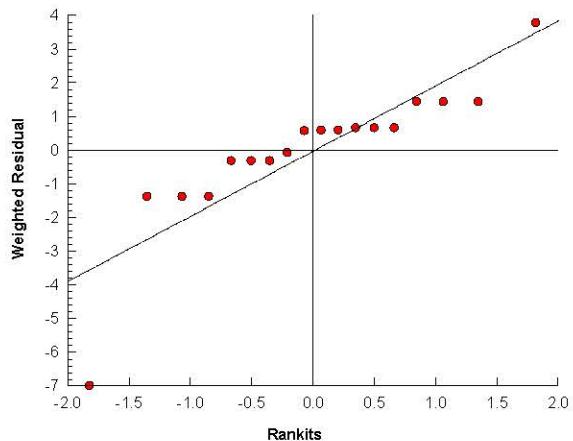
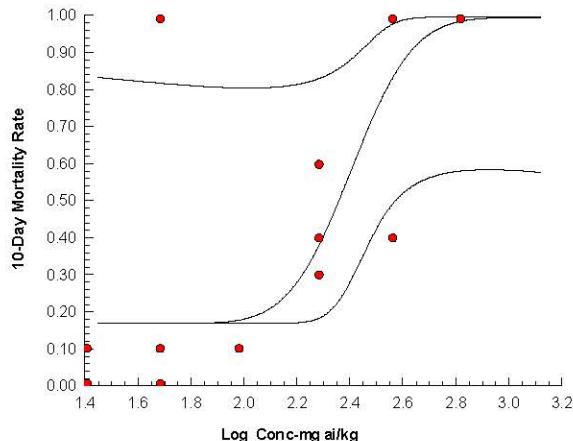
Eurofins EAG Agroscience, LLC

Analysis ID: 19-7252-4680
 Analyzed: 03 Nov-20 19:43

Endpoint: 10-Day Mortality Rate
 Analysis: Linear Regression (GLM)

CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Log-Normal: $\text{inv } \Phi[\pi] = \alpha + \beta \cdot \log[x]$ 

CETIS Analytical Report

Report Date: 03 Nov-20 19:59 (p 1 of 2)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	05-9706-9298	Endpoint:	Food Consumption	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:44	Analysis:	Nonlinear Regression (NLR)	Status Level:	1
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Non-Linear Regression Options

Model Name and Function	Weighting Function	PTBS Function	X Trans	Y Trans
3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi(\log[x/\delta]/\gamma)]$	Normal [$\omega=1$]	Off [$\mu^*=\mu$]	None	None

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	PM SD	Thresh	Optimize	F Stat	P-Value	Decision($\alpha:5\%$)
18	-19.3	46.32	47.27	0.4931	10.36%	26.38	Yes	0.5122	0.6814	Non-Sig Lack of Fit

Point Estimates

Level	mg ai/kg	95% LCL	95% UCL
EC5	155	n/a	305.8
EC10	239.9	n/a	419.2
EC25	497.7	322.6	703.8
EC50	1120	424.5	2954

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision($\alpha:5\%$)
α	26.38	1.283	23.64	29.11	20.57	<1.0E-37	Significant Parameter
γ	1.202	0.605	-0.08732	2.492	1.987	0.0655	Non-Significant Parameter
δ	1120	435.4	191.7	2048	2.572	0.0213	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	10310	3437	3	355.1	<1.0E-37	Significant Effect
Lack of Fit	16.48	5.492	3	0.5122	0.6814	Non-Significant Effect
Pure Error	128.7	10.72	12			
Residual	145.1	9.676	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Variance	Bartlett Equality of Variance Test	7.349	11.07	0.1959	Equal Variances
	Mod Levene Equality of Variance Test	0.9168	4.387	0.5280	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.5365	2.492	0.1731	Normal Distribution
	Shapiro-Wilk W Normality Test	0.923	0.8965	0.1458	Normal Distribution

Food Consumption Summary

Conc-mg ai/kg	Code	Count	Calculated Variate						
			Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	3	27.6	22.78	30.06	2.412	4.177	15.13%	0.0%
48.5		3	24.89	24.32	26.04	0.5727	0.9919	3.98%	9.81%
96.4		3	26.2	23.53	28.77	1.514	2.623	10.01%	5.07%
193		3	23.61	21.72	26.08	1.291	2.236	9.47%	14.45%
366		3	22.76	18.04	29.17	3.319	5.75	25.26%	17.53%
660		3	17.26	16.56	18.38	0.5676	0.9831	5.70%	37.47%

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

Eurofins EAG Agroscience, LLC

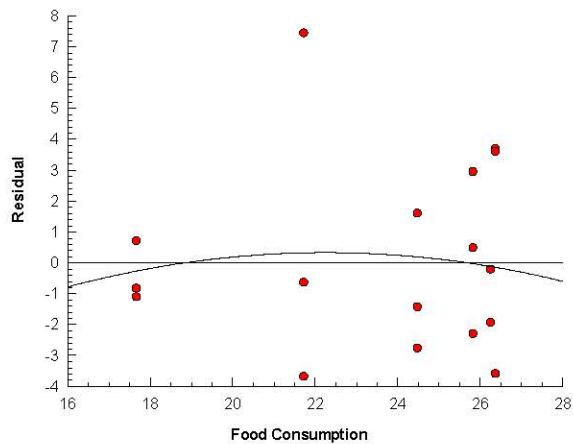
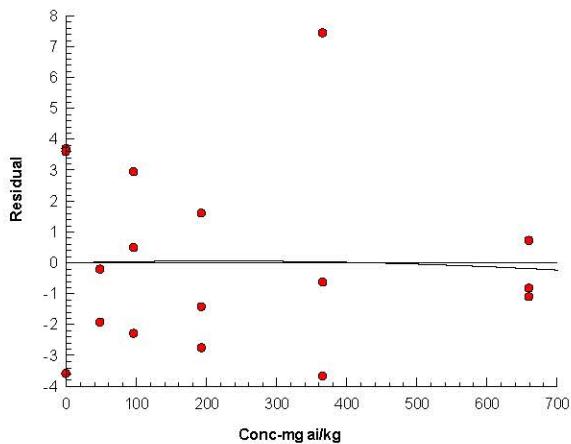
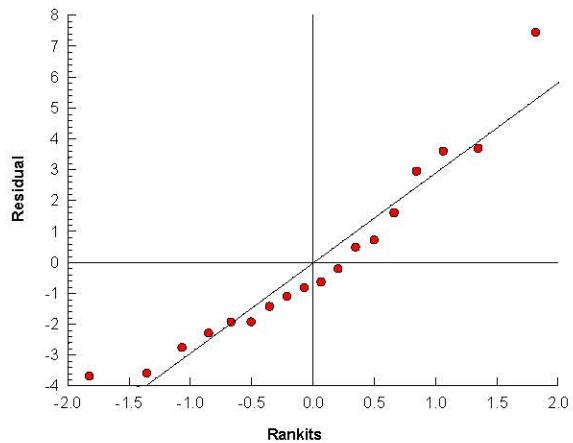
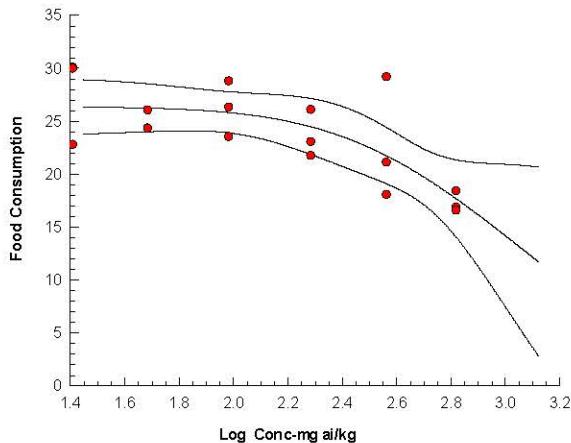
Analysis ID: 05-9706-9298
 Analyzed: 03 Nov-20 19:44

Endpoint: Food Consumption
 Analysis: Nonlinear Regression (NLR)

CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Model: 3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi[\log[x/\delta]/\gamma]]$ Distribution: Normal [$\omega=1$]



CETIS Analytical Report

Report Date: 03 Nov-20 19:59 (p 1 of 1)
 Test Code/ID: 51195301 dc / 07-0057-7497

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

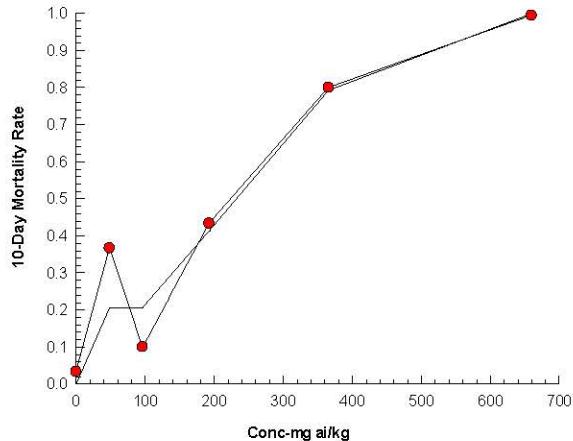
Eurofins EAG Agroscience, LLC

Analysis ID:	11-4422-8897	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:44	Analysis:	Trimmed Spearman-Kärber	Status Level:	1
Batch ID:	15-3068-1512	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Trimmed Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.03333	20.69%	2.322271	0.0514179	210	165.7	266.1

10-Day Mortality Rate Summary			Calculated Variate(A/B)						Isotonic Variate		
Conc-mg ai/kg	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	N	3	0.0333	0.0000	0.1000	0.0577	173.20%	0.0%	1/30	0.03333	0.0%
48.5		3	0.3667	0.0000	1.0000	0.5508	150.20%	34.48%	11/30	0.2333	20.69%
96.4		3	0.1000	0.1000	0.1000	0.0000	0.00%	6.9%	3/30	0.2333	20.69%
193		3	0.4333	0.3000	0.6000	0.1528	35.25%	41.38%	13/30	0.4333	41.38%
366		3	0.8000	0.4000	1.0000	0.3464	43.30%	79.31%	24/30	0.8	79.31%
660		3	1.0000	1.0000	1.0000	0.0000	0.00%	100.0%	30/30	1	100.0%

Graphics

CETIS Analytical Report

Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	09-8930-2219	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:51	Analysis:	Linear Regression (GLM)	Status Level:	1
Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Linear Regression Options

Model Name	Link Function	Threshold Option	Thresh	Optimize	Pooled	Het Corr	Weighted
Log-Normal (Probit)	$\eta = \text{inv } \Phi[\pi]$	Contrd Threshold	0.170843	Yes	No	Yes	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	PM SD	F Stat	P-Value	Decision($\alpha:5\%$)
15	-45.15	98.01	98.96	0.7657437	0.1752173	0.5766	25.34%	0.9521	0.4465	Non-Sig Lack of Fit

Point Estimates

Level	ug/bee/da	95% LCL	95% UCL
EC5	3.003	n/a	n/a
EC10	3.477	n/a	n/a
EC25	4.442	n/a	n/a
EC50	5.831	n/a	n/a

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	Test Stat	P-Value	Decision($\alpha:5\%$)
Intercept	-4.37	2.484	-9.664	0.9234	-1.76	0.0988	Non-Significant Parameter
Slope	5.707	2.881	-0.433	11.85	1.981	0.0662	Non-Significant Parameter
Threshold	0.1708	0.09857	-0.03926	0.3809	1.733	0.1036	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	134.1	67.07	2	12.58	6.2E-04	Significant Effect
Lack of Fit	15.38	5.127	3	0.9521	0.4465	Non-Significant Effect
Pure Error	64.62	5.385	12			
Residual	80.01	5.334	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Model Fit	Likelihood Ratio GOF Test	69.87	25	<1.0E-37	Sig Heterogeneity
	Pearson Chi-Sq GOF Test	80.01	25	<1.0E-37	Sig Heterogeneity
Variance Distribution	Mod Levene Equality of Variance Test	0.9285	4.387	0.5224	Equal Variances
	Anderson-Darling A2 Normality Test	1.375	2.492	9.0E-04	Non-Normal Distribution
Overdispersion	Shapiro-Wilk W Normality Test	0.8116	0.8965	0.0022	Non-Normal Distribution
	Tarone C(α) Binomial Overdispersion	9.951	1.645	<1.0E-37	Sig Overdispersion

10-Day Mortality Rate Summary**Calculated Variate(A/B)**

Conc-ug/bee/day	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	N	3	0.0333	0.0000	0.1000	0.0333	0.0577	173.20%	0.0%	1	30
1.2		3	0.3667	0.0000	1.0000	0.3180	0.5508	150.20%	34.48%	11	30
2.5		3	0.1000	0.1000	0.1000	0.0000	0.0000	0.00%	6.9%	3	30
4.4		3	0.4333	0.3000	0.6000	0.0882	0.1528	35.25%	41.38%	13	30
8.5		3	0.8000	0.4000	1.0000	0.2000	0.3464	43.30%	79.31%	24	30
13		3	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	100.0%	30	30

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

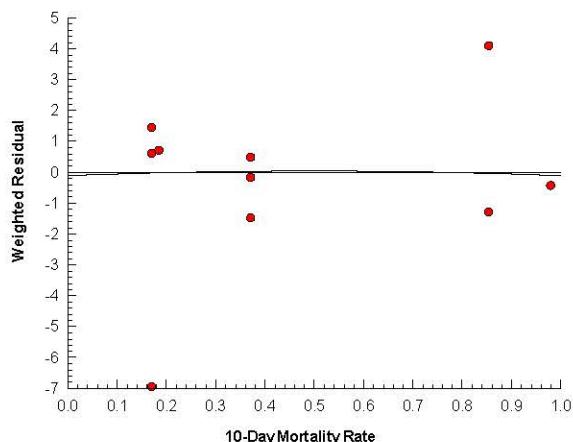
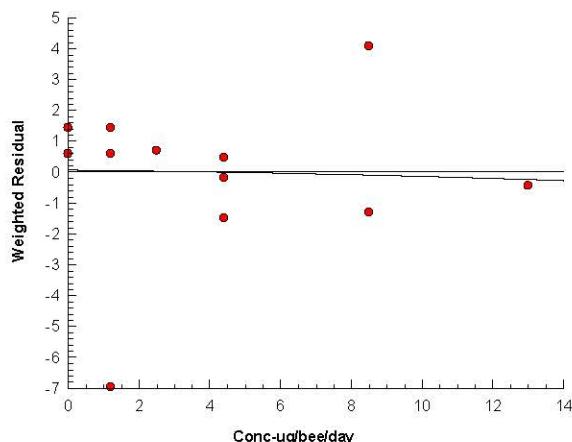
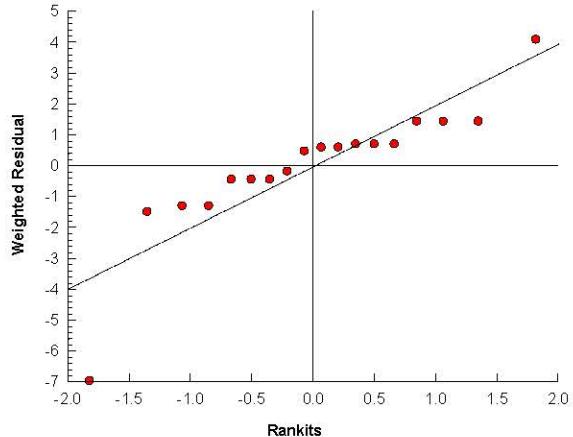
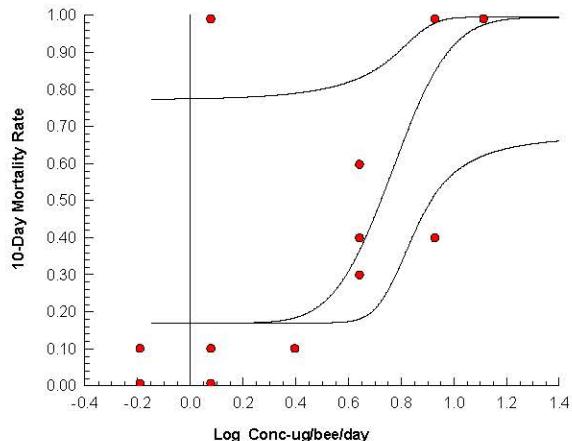
Eurofins EAG Agroscience, LLC

Analysis ID: 09-8930-2219
 Analyzed: 03 Nov-20 19:51

Endpoint: 10-Day Mortality Rate
 Analysis: Linear Regression (GLM)

CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Log-Normal: $\text{inv } \Phi[\pi] = \alpha + \beta \cdot \log[x]$ 

CETIS Analytical Report

Report Date: 03 Nov-20 20:00 (p 1 of 2)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study				Eurofins EAG Agroscience, LLC	
Analysis ID:	11-5307-2149	Endpoint:	Food Consumption	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:52	Analysis:	Nonlinear Regression (NLR)	Status Level:	1
Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Non-Linear Regression Options

Model Name and Function			Weighting Function		PTBS Function		X Trans	Y Trans
3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi(\log[x/\delta]/\gamma)]$			Normal [$\omega=1$]		Off [$\mu^*=\mu$]		None	None

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	PM SD	Thresh	Optimize	F Stat	P-Value	Decision($\alpha:5\%$)
23	-19.58	46.88	47.84	0.4770	9.68%	26.15	Yes	0.6557	0.5947	Non-Sig Lack of Fit

Point Estimates

Level	ug/bee/da	95% LCL	95% UCL
EC5	4.443	n/a	7.872
EC10	6.188	n/a	9.929
EC25	10.76	7.587	14.19
EC50	19.91	8.513	46.58

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision($\alpha:5\%$)
α	26.15	1.187	23.62	28.68	22.03	<1.0E-37	Significant Parameter
γ	0.9119	0.5093	-0.1737	1.998	1.79	0.0936	Non-Significant Parameter
δ	19.91	6.627	5.788	34.04	3.005	0.0089	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Model	10310	3435	3	344	<1.0E-37	Significant Effect
Lack of Fit	21.09	7.031	3	0.6557	0.5947	Non-Significant Effect
Pure Error	128.7	10.72	12			
Residual	149.8	9.984	15			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision($\alpha:5\%$)
Variance	Bartlett Equality of Variance Test	7.349	11.07	0.1959	Equal Variances
	Mod Levene Equality of Variance Test	0.9168	4.387	0.5280	Equal Variances
Distribution	Anderson-Darling A2 Normality Test	0.6307	2.492	0.1009	Normal Distribution
	Shapiro-Wilk W Normality Test	0.909	0.8965	0.0827	Normal Distribution

Food Consumption Summary

Conc-ug/bee/day	Code	Count	Calculated Variate						
			Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	3	27.6	22.78	30.06	2.412	4.177	15.13%	0.0%
1.2		3	24.89	24.32	26.04	0.5727	0.9919	3.98%	9.81%
2.5		3	26.2	23.53	28.77	1.514	2.623	10.01%	5.07%
4.4		3	23.61	21.72	26.08	1.291	2.236	9.47%	14.45%
8.5		3	22.76	18.04	29.17	3.319	5.75	25.26%	17.53%
13		3	17.26	16.56	18.38	0.5676	0.9831	5.70%	37.47%

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

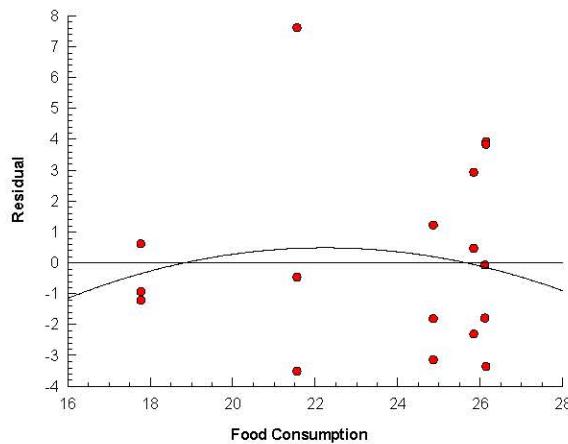
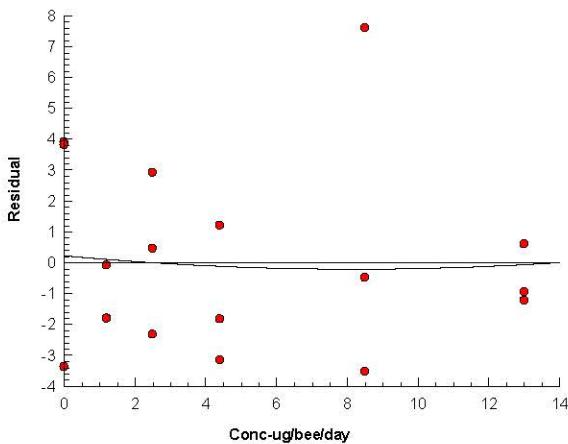
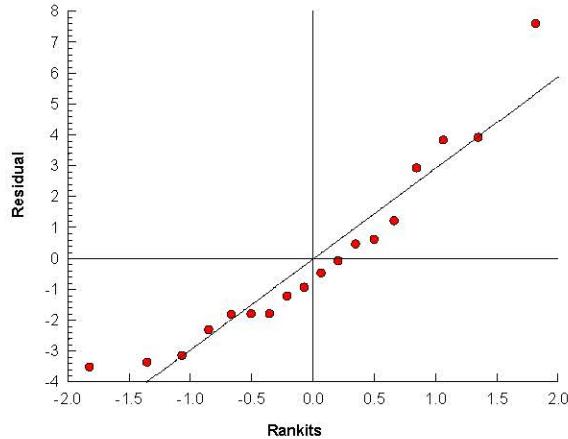
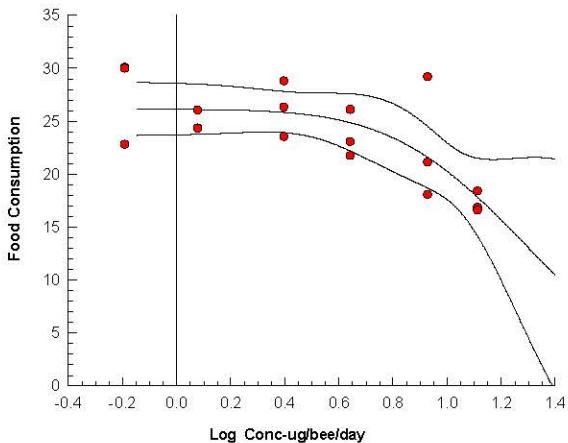
Eurofins EAG Agroscience, LLC

 Analysis ID: 11-5307-2149
 Analyzed: 03 Nov-20 19:52

 Endpoint: Food Consumption
 Analysis: Nonlinear Regression (NLR)

 CETIS Version: CETISv1.9.6
 Status Level: 1

Graphics

Model: 3P Cum Log-Normal (Probit): $\mu = \alpha [1 - \Phi[\log[x/\delta]/\gamma]]$ Distribution: Normal [$\omega = 1$]

CETIS Analytical Report

Report Date: 03 Nov-20 20:01 (p 1 of 1)
 Test Code/ID: 51195301 dd / 09-9266-1609

Special Study Honey bee Adult Chronic Oral Toxicity, 10-day Study

Eurofins EAG Agroscience, LLC

Analysis ID:	11-5823-4748	Endpoint:	10-Day Mortality Rate	CETIS Version:	CETISv1.9.6
Analyzed:	03 Nov-20 19:52	Analysis:	Trimmed Spearman-Kärber	Status Level:	1
Batch ID:	21-2120-3292	Test Type:	2014 Honeybee Adult Chron Oral	Analyst:	
Start Date:	22 Apr-20	Protocol:	Honeybee Adult Chronic Oral Toxicity, 10-day	Diluent:	
Ending Date:	02 May-20	Species:	Apis mellifera	Brine:	
Test Length:	10d 0h	Taxon:		Source:	Eurofins EAG Agroscience, Age: <48

Trimmed Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.03333	20.69%	0.6926454	0.0471895	4.928	3.965	6.124

10-Day Mortality Rate Summary			Calculated Variate(A/B)						Isotonic Variate		
Conc-ug/bee/day	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	N	3	0.0333	0.0000	0.1000	0.0577	173.20%	0.0%	1/30	0.03333	0.0%
1.2		3	0.3667	0.0000	1.0000	0.5508	150.20%	34.48%	11/30	0.2333	20.69%
2.5		3	0.1000	0.1000	0.1000	0.0000	0.00%	6.9%	3/30	0.2333	20.69%
4.4		3	0.4333	0.3000	0.6000	0.1528	35.25%	41.38%	13/30	0.4333	41.38%
8.5		3	0.8000	0.4000	1.0000	0.3464	43.30%	79.31%	24/30	0.8	79.31%
13		3	1.0000	1.0000	1.0000	0.0000	0.00%	100.0%	30/30	1	100.0%

Graphics